


AC. B

X70971



22101513108



Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

https://archive.org/details/b29005152_0001

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS.

BY
JOHN FERGUSON, M.A.

PART I.

[Reprinted from the Transactions of the Glasgow Archaeological Society.]

GLASGOW:
Printed at the University Press by
ROBERT MACLEHOSE AND CO.

1896

Complete set

T. III

L. XV

part

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS.

Ne sis garrulus, sed pone ori tuo custodiam,
et ut filius sapientum, margaritas ante
porcos non projicies.

THOMAS AQUINAS, *Thesaurus Alchimie
secretissimus.*

BY
JOHN FERGUSON, M.A.

[Reprinted from the Transactions of the Glasgow Archaeological Society.]

GLASGOW :
Printed at the University Press by
ROBERT MACLEHOSE AND CO.

1896

AC. B

100 copies reprinted in 8vo, 1882.

50 copies reprinted in 4to, 1896.

65023



BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

SIX PAPERS
READ TO THE ARCHÆOLOGICAL SOCIETY OF GLASGOW
APRIL 1882—JANUARY 1888

BY
JOHN FERGUSON, M.A., LL.D.
F.S.A. LOND. AND SCOT., F.C.S., ETC.
REGIUS PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET
MDCCCXCV

PHYSIOLOGICAL ANATOMY
PHYSIOLOGICAL ANATOMY

65082



NOTES ON SOME BOOKS OF TECHNICAL RECEIPTS, OR
SO-CALLED "SECRETS,"

BY

JOHN FERGUSON, M.A.,
PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

[Read at a Meeting of the Society held at Glasgow on 20th April, 1882.]

THE following notes may serve to some extent as an introduction to a subject wide in itself, and with numerous and important connections. The history of practical invention and of technical progress is one which might well engage the attention of students of anthropology and antiquities, as it throws light on many points connected with the growth of social life and civilization. The desire and the power to turn external objects to his service and convenience are developed to such an extent in man, that, among the many differences between him and other animals, may be reckoned the various arts by which he induces nature to accommodate herself to his wants; among the lower animals one looks in vain for anything parallel to the arts of cookery, medicine, metallurgy—to the systematic use of tools, of clothing, of weapons.

In ancient times the various handicrafts were monopolies of certain families or castes; in the middle ages the handicraftsmen were too glad to pursue their callings in obscurity; it is only in the most recent years that arts and manufactures have acquired such paramount interest, that the special or technical education of those who are to exercise them has come to be thought of national importance. While, in the days of the Greeks and Romans, the artizan was a despicable if not an almost infamous person, and, in the middle ages, was oppressed by the military and ruling

classes, against whom, nevertheless, he carried on a ceaseless struggle until he succeeded in asserting his importance, and even his equality with them, it has been reserved for the present day for ignorance of arts and manufactures, and indifference to their progress, to be as discreditable as they were formerly dignified. The history of the growth of the arts themselves, and of the attitude of society towards them, is, therefore, of wider extent, and of greater philosophical interest than at first sight appears. This history has not as yet been written and, as time goes on and material gathers, the more difficult it becomes. The only work in which the attempt has been made is the "*History of Inventions*," of Beckmann, written towards the end of last century.* This work, however, is less a history in the strict sense of the term, than a collection of antiquarian essays upon various objects of manufacture, and upon some technical questions. The essays, besides, are not arranged in any definite order, and have no direct connection with each other, but they are very elaborate, and show a wonderful amount of research and knowledge. Since Beckmann's time, I do not remember any laborious German who has followed up his work. There is certainly nothing on the subject in English.†

* Beckmann's work is entitled "*Beyträge zur Geschichte der Erfindungen*," and it was published at Leipzig, in five volumes, between 1786 and 1805. An English version and abstract appeared in 1823, in two volumes, and a new edition was published by Bohn in 1846, in two volumes.

† In writing the above I had forgotten some systematic works on the history of arts and manufactures which are more consecutive and philosophical but less thorough than Beckmann's collections. There is the work of Antoine Yves Goguet—" *Origine des loix, des arts, des sciences, et de leur progrès chez les anciens peuples*," published at Paris in 1758. It was translated into English, and there were two editions, of which that of 1775, in 3 vols., 8vo, is now before me. This book partakes largely of the character of a treatise on antiquities, but it embraces sections on the history of arts and manufactures among all the ancient peoples. It is a curious book, and shows familiarity with the classical writers, but it is of no authority now, after the research that has been expended, not only on almost all the topics that the author includes in his discussions, but also on the authorities to whom he owes his information.

A better and more specialized work is the "*Geschichte der Technologie*" of Johann H. M. Poppe, in three volumes, published 1807-11, and forming part of the Göttingen series of histories of science, arts, and philosophy. In the more recent Munich series of histories there is a "*Geschichte der Technologie*," by Karl Karmarsch, in one volume, 1872.

It is not my intention now to say anything about the progress of arts and manufactures at all, but only to bring under your notice a section of literature which is nearly ignored by bibliographers and antiquaries, and is altogether out of the ken of book-reprinting clubs.

It is hardly to be expected that a practical art can have any literature worth speaking of. The man who is busy practising it can have little time to write about it, and he who wishes to learn it must put to his hand and work at it, and that under the supervision of a master, and not by merely reading books. This is the apprenticeship that every one must serve. No amount of reading will make a sculptor, or a gardener, or a shoemaker, or a surgeon, or a musical executant. The arts must be acquired by practice, and they are extended and improved by practice. Every one who exercises them comes to have special power and certain ways of doing things, which may enable him to surpass others who are similarly engaged. These are his "secrets," which very often he cannot, or will not, reveal to others. Rapid insight into a particular case, power of overcoming physical obstacles, ingenious adaptations of means to ends, exhibition of due care at the right time, enable one man to effect what others cannot.

In earlier times artists were very chary indeed of telling their secrets, and in the great craze of the middle ages—the craze to make the philosopher's stone—the adepts were continually on their guard to conceal their art from the unworthy, while revealing what was thought suitable for the

Both of these works give good accounts of the growth of arts and manufactures, and contain numerous references to books and papers on them.

Quite recently I came across a little work entitled "*A pleasant and compendious History of Inventions*," London, 1686, 12mo. In it an attempt is made to give, in briefest outline, the origin of some important inventions. Defective as were both the plan and execution of this booklet, the author had a very clear notion of the importance of his subject, and of its general interest.

So far as I know, no complete and systematic work on the history of arts and manufactures has appeared in this country. A collection of essays by David Bremner on the Industries of Scotland was published at Edinburgh in 1869. They deal chiefly with the then state of the industries, although there are usually short historical narratives prefixed. The work entitled "*Manufacturing Arts in Ancient Times*," by James Napier, London, 1874, 8vo, is occupied almost entirely with the history of metals and of dyeing.

genuine artist to know. The philosopher was warned to admit no one to his laboratory—or to his confidence. Even at the present day, secrets have not wholly died out; there are manufactures which are still undivulged, and any one engaged in the scientific investigation of some phenomenon or law of nature, will not tell his professional brethren unreservedly what he expects to discover, before he has finished his labours.

It would seem, however, that in spite of the precautions of the older artists, their private ways of working, of producing substances, of making colours, and effecting all kinds of material changes, oozed out and became at last public property. But even after their publication, these methods and receipts retained, paradoxically, the name of “Secrets,”* and many collections of them appeared during the last three or four hundred years. It is beyond my power to give a complete list of these; my purpose at present, as I have already said, is to exhibit a few of those to which my attention happens to have been recently directed, and of which some at least are possessed of a certain amount of archæological and bibliographic interest.

This set of books divides into several groups, but perfect classification of them is impossible on account of the way the themes interweave.

I. There are collections of secrets of nature, or treatises on natural history, general science, and cosmogony. Of this set, Pliny’s history seems to have been the model.

II. There are treatises on what was called natural magic (as distinguished from black magic or necromancy)—that is, the production of secret effects in optics, acoustics, magnetism, &c., &c., by natural causes. This is the form which natural philosophy originally took.

III. There are treatises which deal chiefly with chemical, pharmaceutical, and medical secrets.

IV. There are treatises on life and generation: physiological secrets.

V. There are treatises on technical or art secrets, strictly so called, and they may be arranged conveniently in two classes: general collections con-

*In the remarks which followed the reading of the paper it was pointed out that not so long ago chemical works were known, everywhere in Scotland at least, as “secret works.” Some are still practically such.

taining receipts relating to a variety of arts, and special collections containing receipts of use in one art or handicraft only.

I have examples of each of these classes to exhibit.

The earliest medieval treatise on the subject of the practical arts to which I can refer at the present moment is that of Theophilus. It exists in MS. in several libraries and was first edited with translation, introduction, and notes by Robert Hendrie, in 1847.* The date is not exactly known, but the work seems to have been written in the eleventh century. It is in three books. The first treats of the materials used in painting and illuminating; the second of the making and colouring of glass; the third of metal working, bell making, organ building, lapidary work, colours. It is, therefore, a very important and interesting work for the history both of the sciences and practical arts. It mentions a number of substances and the manner of making them, which involved chemical skill, and it treats of arts, the results of which remain to this day the admiration and the despair of connoisseurs.

One of the biggest, if it be not the biggest, book written in the middle ages and printed in the fifteenth century, was the work of a Dominican monk, called Vincent de Beauvais.† It is a vast compilation or encyclopædia, a mirror of human knowledge as he called it—*Speculum quadruplex*—divided into four main parts, of which science and art form one. Of this huge work I have never encountered a copy, and have only seen a fragment about alchemy reprinted in a collection of such pieces. The author was born about 1190, and died about 1264. His labours, like those of his contemporaries, were chiefly devoted to philosophy—moral, metaphysical, and theological—and he engaged in the conflict then raging

* A French translation had appeared previously in 1843, edited by Count de l'Escalopier.

† For information—not much—about the author, an abstract of the bibliography of his work, and an outline of the contents of it, reference may be made to the article "Vincent de Beauvais" by Daunou, in *Histoire Littéraire de la France*, Paris, 1835, 4to, T. XVIII., pp. 449-519, and the numerous authorities there quoted. Through some oversight, Hain, while giving a cross reference, has omitted Vincent's name in the right alphabetical place in his *Repertorium Bibliographicum*. The *Speculum* appears to have been printed by Johann Mentelin at Strasburg, and finished by 1476. It is in 9 volumes folio: *Speculum naturale*, 2; *morale*, 2; *doctrinale*, 1; *historiale*, 4.

between the realists and nominalists, but he was able to turn from discussions on words and definitions, to the contemplation of external objects. The *Speculum Naturale*, or history of nature, is a commentary in thirty-two books, the text being the narrative of the creation as given in Genesis. This treatise deals less with arts than with cosmogony and natural history.

In this respect it differs, therefore, from the writings of two of his contemporaries, viz., Roger Bacon (1214-1292-4), and Albertus Magnus (1193(?) - 1280).

In his *Opus Majus*, Bacon has given an encyclopædia of human knowledge, and especially of physical science, but it is another work of his which falls to be mentioned in this place, namely, his "*Epistola de secretis operibus naturæ et artis, et de nullitate magiæ.*" This is a short report on the very wonderful effects that can be produced by natural means, and it is in this tract that occurs the often-quoted allusion to the composition and power of gunpowder. This letter was intended as a reply to the persistent attacks of malignant ecclesiastics who accused him of practising "black magic" *—by showing that the apparent mystery was due to the ignorance of his accusers and not to any compact of his with the infernal powers.

Albertus Magnus is credited with a treatise of secrets, but the authorship has been disputed and has been assigned to Henricus de Saxonia, one of his pupils, but whether this be correct or not the work usually, if not invariably, bears the name of Albertus. It deals with physiological secrets only, and that in a very brief manner; so that, both in range and in bulk, it is quite the reverse of an encyclopædia. Notwithstanding, if we may judge by the number of editions, it was one of the most popular treatises from the 15th to the 17th century.† Albertus was the author

*The black magician, or necromancer, was believed to have carried on a correspondence with the fiend and entered into a compact by which, on the liberation of the latter from his "prison-house," he would assist the magician in carrying out schemes which, in their expected results, could be called nothing else than supernatural. The correspondence with the magician's name at it, was usually brought up in evidence against him—very much to his annoyance—when he had to implement his share of the bargain.

†It is entitled "*De Secretis Mulierum,*" and a list of the early editions is given by Hain (*Repert. Bibliogr.*, Nos. 549-568). In character it closely resembles the "*De phisio-*

likewise of a treatise on the secrets of plants, animals, and stones, in which he described their occult virtues.

In the following century flourished Bartholomew Glanville, a Cornishman, author of a ponderous work on the Properties of Things, divided into nineteen books. As it deals chiefly with natural history it hardly falls within consideration at present, but it gives incidentally technical descriptions. It was first printed in the fifteenth century, the earliest edition being of date 1478, and it was often re-issued, besides being translated into French, Dutch, and Spanish. It was also translated by John Trevisa in 1398 into English, and published by Wynkyn de Worde a century later.*

In the fifteenth century another book which had a considerable share of popularity was printed. It is entitled "*Lucidarius*," and was written by a monk called Honorius of Strasburg. It first appeared in 1479, but the edition which I have here and which is worth examination for its uncommon type and curious woodcuts, was printed at Strasburg in 1499, by Mathijs Hupfuff. It is very rare, and though Hain mentions it (*Repert. Bibliogr.*, No. 8814), he had no actual copy for collation. He consequently says that the book has twenty-nine leaves, whereas this copy has thirty, the last containing a woodcut of the carrying of the cross. This work is a sort of catechism of natural and supernatural things. The questions are asked by the scholar, and the answers are given by the master, who thus imparts the required instruction in the secrets of creation.

All these works are of a general character, and, except the first, deal with the physical and natural sciences, as these were understood from the twelfth to the fifteenth century—they are examples chiefly of the first class. That some of them were among the books first printed in the fifteenth

nomia" of Michael the Scot, and the two tracts were frequently printed together during the 17th century. It was translated into French and German. An edition of the French (Cologne, 1722), entitled "*Les admirables secrets d'Albert le Grand*," contains, besides the two tracts of Albertus, a third consisting of practical receipts, and a fourth on physiognomy.

*Johnson's *Typographia*, London, 1824, I., p. 354. There is a copy of the Latin edition printed in 1480, in the Euing Collection, Glasgow University Library. It is in folio, in double columns, printed in fine Gothic character.

century and went through several editions and translations, notwithstanding their bulk in certain cases and their frequently absurd contents, shows that even then there were many people anxious to know something about nature and external objects.

The sixteenth century produced no great encyclopædia like some of those I have mentioned. Either the breed of encyclopædist had become extinct, or else knowledge had grown too great to be gathered by one man in his lifetime and put in a book, but we find several less ambitious authors dealing with different kinds of secrets, some of nature, others of arts.

First among those whose works I have here comes Levinus Lemnius, who was born at Zirickzee in Holland, in the year 1505, and after studying at various places became a physician in his native town. Between the years 1559-64 he published a work entitled "*De Miraculis Occultis Naturæ, Libri IV.*" Of this book several editions appeared, of which I have here two, Franckfurt 1604, and 1611, both in 16mo. It was translated into English under the title of "*The Secret Miracles of Nature, in four books,*" London, 1658, in small folio, of which there is a copy here. It was translated into French by the alchemist Gohory and published at Paris [Orleans] in 1568, and it was translated also into Italian.

It is a most heterogeneous collection, heterogeneously piled together, of notions on physiological, physical, medical, religious, and moral topics, with attempts to explain phenomena in nature which subsequent enquiry has shown do not exist at all. The collection is a very curious one, notwithstanding, and furnishes good instances of popular ideas about natural things current three hundred years ago. It would be difficult to bring this collection under any of the classes above mentioned—the only thing tolerably certain is that it contains hardly any practical receipts.

Contemporary with Lemnius, but ten years his junior, was Conrad Gesner, who flourished from 1516 to 1565. One might spend much time over the works of this really distinguished man, who was called the German Pliny, on account of his comprehensive learning. Besides his writings on animals, plants, and minerals, on languages, pharmacy, natural philosophy, and so on, he was one of the first bibliographers and book cataloguers, his "*Bibliotheca Universalis*" being the best and most com-

plete catalogue which appeared in the sixteenth century, and being still a valuable book of reference.

Under the pseudonym of Evonymus Philiatros, he published a book entitled "*Thesaurus de remediis secretis*"—a treasury of secret remedies. It appeared at Zurich in 1554, and in the course of a few years went through numerous editions, and was translated into English, French, and German.

I have here examples of all these:—

1. Latin.—An edition in 16mo, Lyons, 1555, by Balthazar Arnollet, and another without date, printer's name, or place, but as the device on the title page is a tree with five frogs,* doubtless this edition was printed by Froschover at Zurich. Neither of these editions is mentioned by the bibliographers.

2. German.—The German translation appeared at Zurich in 1555, and other editions were published in 1582, 1583, and 1608. Of this last there is a copy here.

3. French.—Like the German, the French translation was executed immediately after the Latin appeared. It was published at Lyons in 1555 in 4to, again in 1557 in 8vo, and in 1559, in 8vo, by Antoine Vincent. I have not observed any reference to the 1559 Lyons edition. As will be seen by the copy here, it is a very prettily printed book with nice woodcuts of herbs and chemical apparatus.

4. English.—It was translated into English by Peter Morwyng, and published by John Day, at London, in 1559. Another edition appeared in 1565, which corresponds page for page with the earlier one, and ten years later, in 1575, a third edition came out. The copy here is of the 1565 edition. It is handsomely printed in bold black letter, and is illustrated by woodcuts of plants and apparatus for distillation. The main purpose indeed of the book is to describe the way of preparing remedies from plants by that method.

In 1569, after Gesner's death, a second part of the treasure was edited

*A more elaborate form of this device will be found on the title page of Gesner's "*Bibliotheca*," ed. Simler, 1582, printed by Froschover. The device is a punning one.

by Caspar Wolff or Wulphius. It became nearly as popular as the previous part, and was translated into French and English.

1. Latin.—It was first printed at Zurich in 1569, but I have no copy to exhibit.

2. The French version was executed by Jean Liebaut, and appeared under his name at Lyons in 1593, in 8vo. Thereafter at Rouen in 1628, and 1643, of which edition a copy is here. I have here also another published at Rouen with the date MVIC, which would appear to mean 1600, and it would therefore be much earlier than the other, but against this date is the fact that it has not the look of a book printed in 1600. Besides it is called on the title page *Derniere Edition*, so that one would suppose it to be subsequent to those above mentioned.

3. The second part was Englished by George Baker, surgeon to Queen Elizabeth, and two editions of it were published, of both of which copies are before us. The first bears date 1576 and is entitled the "*Newe Jewell of Health*." It was published in London by Henry Denman, in small 4to, and printed in black letter. It is illustrated with numerous woodcuts of apparatus and operations. The second edition appeared in 1599 under the title of "*The Practice of the New and Old Phisicke*." It was published at London by Peter Short, and is also in black letter.

It will be noticed that this work in particular contains the pharmaceutical and to some extent the chemical knowledge of the time of Shakespeare. The copy of the first part which is here was printed the year after he was born, and it is very likely that the pictures of plants and chemical operations which it contains would not escape his notice even while still a child. The examination of these books gives one some insight into the references which occur in the plays to the physician's art and the works of the apothecary, who was not always then, or for long after, distinguished with sufficient accuracy from the poisoner.

Gesner's work is specially concerned with medical and pharmaceutical secrets, and does not take up either natural history and physical, or trade and technical secrets.

A work more representative of technical art than any of the preceding was the "*Pirotechnia*" of Biringuccio, which was published at Venice

in 1540. It deals particularly with the extracting of metals from their ores, their fusion, casting, calcining, and conversion into various compounds, the preparation of salts, the distilling of acids, the founding of cannon, the manufacture of gunpowder and of fireworks. Of the several editions which appeared I have here the first edition of 1540, in small quarto, and the 8vo edition of 1559, also printed at Venice.* The work was translated into French and published at Paris in 1572, of which translation there is a copy here. Copies both of the 1540 Italian and the 1572 French editions are uncommon.

In the compilation of books of secrets the Italians in the sixteenth century showed considerable activity, and the examples of them that are here may be taken together in chronological order.

The earliest of them is ascribed to Don Alessio Ruscelli, a Piedmontese, whose reputed work was first printed at Basel in 1536, in 8vo. It went through a very great number of editions, but although it was one of the most popular of the collections of receipts or secrets, copies of it are now quite unusual in catalogues. The editions were in all likelihood actually worn out by use. The copy here is a comparatively early one, having been printed at Venice in 1568. This collection was translated into English, and the four different parts appeared in succession, the first in 1562, the last in 1578. According to Watt, who gives the titles at length and enumerates different editions,† the secrets appeared in every European language. He adds that an abridgment of it was long a popular book at the foreign fairs, and Nisard mentions a book which consists of extracts from Albertus Parvus, Cornelius Agrippa, and others, but which he thinks is chiefly a rehabilitation of the work of Alexis.‡ This collection, therefore, is still publishing and selling in France by the pedlars, and flying stationers, as they used to be called. The editions Nisard mentions are of 1837 and 1839. It is hardly necessary

*I have since got a copy of the second (?) edition, printed at Venice in 1550, 4to.

†An edition of 1595, London, Peter Short, is not mentioned by Watt. It is in small quarto, black letter, and resembles the 1599 edition of the second part of Gesner's work. There is a copy in the Euing Collection, Glasgow University Library.

‡Ch. Nisard, "*Histoire des Livres Populaires*," Paris, 1854, I., p. 225.

to say that however creditable the Don's compilation may have been to the sixteenth century, it gives one but a poor idea of the progress of true physical and medical knowledge among the mass of the people in the nineteenth, that such books can be sold for actual perusal and reference.

A similar collection to the preceding was made by Gabriello Falloppio, celebrated as an anatomist, who lived between 1523 and 1563. The work is entitled "*Secreti Diversi*," and it appeared after his death in 1566. There is a copy of it here. It contains receipts for preparing different bodies to be used in medicine, for the production of wines, alcoholic extracts of plants, cosmetics and waters. It also explains the chemical treatment of the metals, their alloys, the way of changing their colours, converting them into different kinds of salts and so on. There is no English version of this, so far as I know, but there was a Latin edition, and one in German, Franckfurt, 1641, of which there is a copy here.

Two years later, in 1568, there appeared at Venice another collection of secrets. The author or compiler was Leonardo Fioravanti, a physician of Bologna, who died in 1588. His collection is arranged very much in the same way as Falloppio's and it contains not only secrets of medicine and surgery with the necessary preparation of drugs and remedies, but receipts for several technical purposes as well. Besides the Italian edition of 1571, Venice, 8vo, I have here the German translation of Darmstadt, 1624. Of this work an English translation was made by John Hester, which was first published at London in 1582, in 16mo. It was afterwards reprinted with some other translations by the same hand, and appeared in small quarto in 1652. Of this edition I possess a copy. The translation differs in several details from the Italian, and it embraces only the medical section of the original.

A much better known man than any of these published a collection of curious arts at Naples in 1558. This was the Neapolitan, Giambattista Porta, who lived between 1538 and 1615, made long journeys in search of natural knowledge, and formed an Academy of the Secrets of Nature in his house at Rome, which was suppressed of course.

His work is entitled "*Magia Naturalis*," and it is divided into twenty books, according to subjects. This is a more comprehensive work than

some of its predecessors, but I cannot say that in its contents it is much more sensible. It had its share of popularity, however, passed through many Latin editions, and was translated into all the languages. Besides three of the Latin editions (Frankfurt, 1591, Leyden, 1644, and Amsterdam, 1664), I have here a copy of the scarce English translation of 1658, with the still scarcer frontispiece, which contains a portrait of the author, and a representation of the four elements, and of Art and Nature, disposed in compartments. Among the curiosities contained in the first edition of this book, 1558, is an account of the camera obscura as it was known—without the lens—to Leonardo da Vinci. In the 1589 edition it is described with the lens, but there is no proof of what has been stated, that the instrument was either invented or improved by Porta. On the whole, the optical division is one of the best in the *Magia Naturalis*.

The last of the Italian collections I have to show is that of Leonardo Locatelli, a physician, like most of the older naturalists. The work is entitled "*Theatro d'Arcani*," and it deals chiefly with chemical and alchemical changes and products. I have here the edition of Milan, 1644, and that of Venice, 1667. So far as I know there was no translation published.

The preceding are almost all mixed collections, but in the sixteenth century there appeared a series of small books, of purely technical character, about which I have failed in getting any information. The only thing to be done therefore is to enumerate and describe the books themselves, which are now before us.

The oldest is entitled "*Künstbüchlin*," and it was printed at Augsburg in 1537.* This is a collection of receipts, pure and simple, intended for practical workpeople. The topics are the working of metals, the making of colours, the dyeing and colouring of various objects, the calcining of the metals, and such like.

In 1549 there was published at Amsterdam a small volume, entitled "*Kunst Boeck*," which I have not seen referred to in the bibliographies. It is said to be compiled and in part translated—*ghecolligeert ende eensdeels*

*Graesse, *Trésor de Livres Rares*, Dresden, 1863, iv., p. 53, quotes this same book, but gives the date, 1538. Other later editions are mentioned.

getraslateert—by Symon Andree. The translated sections are from the “*Künstbüchlin*.” In 1581 the translated part of the preceding was republished, with a second tract containing different receipts from those in the earlier one, and in 1600 there appeared at Amsterdam an edition of all the parts together in Dutch. In 1687 finally a modernized reprint of the “*Künstbüchlin*” appeared at Franckfurt, in 12mo. These collections represent fairly the kind of receipts for practical purposes current in the sixteenth and seventeenth centuries.

Johann Jakob Wecker, a physician at Basle, added another compilation to the preceding. It appeared in 1582, and several editions were published. That which I have here was printed at Basle so late as 1701, and is entitled “*De Secretis Libri xvii.*” It is arranged in a most systematic manner, and in this respect is superior to all the others; but one cannot give much praise to the information which the book contains. An English version was printed in folio, in 1660.

The seventeenth century produced a large number of books of secrets, of which there are one or two here.

A work somewhat similar to Wecker’s, but of a more philosophical cast, was written by Heinrich Nollius, and published at Franckfurt in 1619. It is entitled “*Naturæ Sanctuarium: quod est Physica Hermetica . . . methodo perspicua et admirandorum secretorum in Naturæ abyssu latentium philosophica explicatione decenter in undecim libris tractata.*” This work contains a discussion on general physical ideas and principles from the standpoint of the alchemical or hermetical philosophy then in vogue, and, as is said on the title, deals with the hid secrets of nature rather than of practical science and art.

Works treating more strictly of natural phenomena and practical physics were compiled by Casper Schott, a Jesuit, and Professor at Würzburg. Reference may be made to two of his works. “*Physica Curiosa, sive Mirabilia Naturæ et Artis Libris xii. Comprehensa,*” printed at Würzburg in 1667, in 4to. This treatise is chiefly on Natural History, and contains a great many drawings, of which those depicting different monsters, both of animals and human beings, show the greatest amount of ingenuity and originality on the part of the artist. The boy with the elephant’s head,

puer capite elephantino; the monstrous cock, with hoppers, and a tail like a cow's, set apparently in a metal socket; the *infans cum promuscide et capitibus animalium*; the *vitulomonachus*, or bull-calf monk; the *equus cute lacerâ*, or horse with the slashed doublet, and numerous others, surpass anything in the way of development devised by recent naturalists.

Ten years later, in 1677, there appeared at Bamberg, Schott's "*Magia Universalis Naturæ et Artis*," in four volumes, 4to. This is a treatise on old Natural Philosophy, and of the arts thereon depending, for instance, under acoustics the author describes organ building. This work is very copiously illustrated, and the general excellence of the drawings of apparatus and experiments is noticeable. The artist has been a much more matter of fact person than the other.

About the same time, but without place or date, there appeared a volume in 4to, entitled "*Joco-Seriorum Naturæ Centuriæ 4*." It bears the name of Caramuelius as the author, but in all probability this is a pseudonym, and the real author was Schott.* It is a collection of curious things to be effected by physical causes, merely for the sake of amusement, and without any practical purpose in view.

In English two technical books were published that had some reputation. Gabriel Plattes' "*Discovery of Subterranean Treasure, viz., of all manner of mines and mineralls, from the gold to the coal*," appeared at London in 1639. This, as its name indicates, is concerned chiefly with mining and metallurgy, but there is a section at the end devoted to the colours that can be extracted from vegetables and the way of dyeing in fast colours. The other treatise is Sir Hugh Plat's "*The Jewel House of Art and Nature*," London, 1653. This a very mixed collection, as it includes receipts and descriptions from all the sciences. Though not entitled "secrets," these two tracts belong to the category.

In France a certain Mdlle. Marie Meurdrac published a little work

*Some ascribe it to Athanasius Kircher, but that may be because a tract by him is added at the end. Internal evidence is in favour of Schott. For example, on page 272, reference is made to "our cryptography in the first book of part four of the *Magia*," and this reference corresponds with the Bamberg edition, iv., p. 1. As to the date the chronogram with which the preface concludes would seem to point to 1661.

with the quaint title, "*Compassionate and Simple Chemistry written for meritorious ladies.*" Of this there is a German translation by Johann Lange, Franckfurt, 1676. The collection consists chiefly of pharmaceutical and, as was to be expected, cosmetical receipts. The subject is arranged in six books, and the last is devoted specially to the preparation of those substances with which ladies at that time were wont to preserve their beauty.*

During the course of the seventeenth century some arts had so far advanced that treatises dealing with them alone began to appear. This is notably the case with metallurgy, an art which has always occupied a prominent place and has a considerable literature. Glass-making also in the seventeenth century can boast of a special literature. The German chemist Kunckel published a book on the subject at Franckfurt in 1679: a Florentine, Antonio Neri, another, of which I have the late 1686 Amsterdam edition. Of this book Christopher Merrett issued an English translation in 1662; lastly, Blancourt wrote a treatise in French of which an English translation was published in 1699 at London, under the title; "*The Art of Glass. Showing how to make all sorts of Glass Crystal and Enamel. . . . A work containing many Secrets and Curiosities never before discovered.*" †

Another special technical treatise was that of Pietro Maria Caneparo—"*De Atramentis,*" which, though dealing professedly with ink and black colours, is much more comprehensive than its name denotes, as it includes the technology of pyrites, of vitriol, of the oil of vitriol, and of different colours. I have here two editions, the first published at Venice in 1619, and the second at London in 1660.

It must not be forgotten, however, that parallel with these empirical

* In books of receipts cosmetics occupy sometimes a considerable space, but there are, besides, works specially devoted to the subject. Amongst these I may mention an exceedingly scarce work by Jean Liebaut, to whom as translator of Gesner's *Thesaurus* reference has been made above. It is entitled "*Trois Livres de l'Embellissement et Ornement du corps humain.*" Paris, 1582. 8vo. pp. 16—464—16.

† The most recent book on the subject which I have seen is by the French chemist Peligot. "*Le Verre. Son Historie, sa Fabrication.*" Paris, 1877. 8vo. A popular work, also from the French, was published at London in 1870, "*Marvels of Glass-making in all ages,*" by A. Sauzay. 8vo.

books, progress was making, though slowly, in those sciences on which the successful and sound development of their applications to the arts depends. In chemistry, and especially in pharmaceutical chemistry, that is in the preparation of natural substances for use in medicine, which occupies so large a place in some of these receipt books, there was considerable advance; and, in addition, a very great impulse to technical and applied chemistry was given towards the end of the seventeenth century by Glauber and by Becher.

But, notwithstanding, the books of secrets in the eighteenth century in many cases showed a retrogression towards credulity and absurdity, for this century has a broad shadow of ignorance and superstition athwart its vaunted enlightenment. It was this ultra-rational age which encouraged such books as the "*Secrets Merveilleux de la Magie Naturelle et Cabalistique du Petit Albert*," and a host of similar would-be magical and cabalistical books. They are of interest only as studies in the aberration of the human mind. But even in the works of men who ought to have known better we encounter the most ridiculous and gross ideas. The French chemist Lemery made a collection of receipts which was translated into English and published at London in 1711. Its title is "*New Curiosities in Art and Nature: or a Collection of the most valuable secrets in all Arts and Sciences*." If any one is desirous of seeing the puerile credulity which, in the same age and country, may run parallel with an equally contemptible scepticism, let him turn to the pages of this precious compilation. Some of the collections, however, are a little more practical and more rational than the preceding, but in all of them there is a conspicuous empiricism.

A few years later, in 1723, Dr. William Salmon, a great compiler of books, issued a work containing "*Choice experiments and observations on Building, Husbandry, Gardening, Mechanics, Chemistry, Painting, &c.*" London, 8vo. Of this I have no copy, but I have here another similar and earlier work by the same author. It is entitled "*Polygraphice, or the Arts of Drawing, Engraving, Etching, Limning, Painting, Varnishing, Japanning, Gilding, &c. . . . Eighth edition*." London, 1701. Though professing to deal with the arts of design it is far more comprehensive and

includes the arts of dyeing and staining, alchemy, chemistry, chiromancy, arts of beautifying and perfuming, and so on.

I possess also two small treatises; one is without date, but belongs obviously to the last century. It is entitled "*Arts Treasury of Rarities: and choice Inventions. . . . The fifth edition. London . . . G. Conyers. . . . Price 1s.*" This is really a book of practical receipts, including such subjects as the dyeing of cloth, silk, hair, bone, leather; gilding, lacquering; removing spots of tar, grease, oil; preserving from moths; cementing broken glass, and so on. The other is entitled "*La Magie des Artistes . . . ou collection complete des secrets utiles. . . . Harlem. . . . 1783.*" 12mo. This work is similar in contents to the preceding, and both are free from the absurdities already spoken of.

With the progress of the sciences and with insight into the causes of chemical and physical change, books of secrets like the preceding can no longer show any reason for existence. If, therefore, they circulate at all it is as chap books, the hawkers' reprints of Aristotle, Albertus Magnus, &c., already referred to, which have little interest from a bibliographical, and none from a scientific point of view, or else as collections of trivial receipts which are of no practical use. Any one wishing sound information on a practical matter will now go to such a work as Cooley's Cyclopædia of Practical Receipts, or Ure's Dictionary of the Arts, or to some of the numerous works on applied science and technology in which the rationale of the processes, or at least rational processes are given.* Arts and manufactures are passing more and more from the empirical to the scientific state, and to appreciate the immeasurable improvement that takes place when a manufacture is based on a rational foundation and not on mere empiricism and what is called familiarly "rule of thumb," a comparison may be made, say of Canepario's account of sulphuric acid making with the treatise by Lunge on the same subject, or the tiny chapters on iron

* One still more recent is now to be had. Its title is "*Spon's Encyclopædia of Industrial Arts, Manufactures, and Raw Commercial Products,*" and it has just been published in London in two volumes. The author, editor, publisher, or whoever is responsible for the advertisement of it, makes a special merit of its containing a minimum of scientific and historical details.

smelting in Agricola or Ercker, with Lowthian-Bell's Studies of Blast Furnace Phenomena or Percy's Treatise on Iron.

On another occasion I hope to communicate to the Society extracts from some of the books now exhibited, and to supplement the list with notes on other works of a similar kind, which I have not in the meantime at hand.

Postscript.—I have just become aware of the existence of a "*History of Inventions*," by F. S. White; but of the book I, as yet, know nothing.

#11395

15 vol

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS.

BY
JOHN FERGUSON, M.A.

PART II.

[Reprinted from the Transactions of the Glasgow Archaeological Society.]

GLASGOW:
Printed at the University Press by
ROBERT MACLEHOSE AND CO.

1896

T. III

Lxxv

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS.

BY
JOHN FERGUSON, M.A.

PART II.

[Reprinted from the Transactions of the Glasgow Archæological Society.]

GLASGOW :
Printed at the University Press by
ROBERT MACLEHOSE AND CO.

1896

100 copies reprinted in 8vo, 1882.

50 copies reprinted in 4to, 1896.

NOTES ON SOME BOOKS OF RECEIPTS, OR
SO-CALLED "SECRETS." PART II.

BY

JOHN FERGUSON, M.A.,

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

[*Read at a Meeting of the Society held at Glasgow, January 18th, 1883.*]

To the notes communicated to the Society last session* I have made some additions, having in the interval met with several works not then referred to, besides other editions of certain of the receipt-books. As in the first part, the present notes are arranged under two heads: 1st, concerning writers on the history of inventions; 2nd, concerning books of receipts or secrets.

1st. The writers on the history of inventions are not so few as was formerly represented, and a considerable number have to be added to those already mentioned. In pursuing this enquiry I have once more encountered the difficulty of discovering a subject about which some person does not know much more than one's self. When I first threw together a few notes on some receipt-books that had passed through my hands, I had no intention of compiling a bibliography either of such books, or of those on the history of invention, but once started, curiosity drew me on to see if many books of the kind existed. Then it was I found that, so long ago as 1792, Beckmann had not only anticipated the idea of a bibliography of the history of invention, but had actually realized it to an important extent.† Apart from his undoubtedly great genius for

* See *Transactions of the Archæological Society of Glasgow*, vol. ii. p. 180.

† *Beiträge zur Geschichte der Erfindungen*, Leipzig, 1792, iii. pp. 449, 559.

literary and antiquarian research in this branch of history, Beckmann appears to have had exceptional facilities at Göttingen for pursuing it, and his elaborate essays show he profited by them. The sections, however, on the bibliography of the subject are to be found only in the original German edition of his work, for the English translators and editors have omitted them, as they have done other pieces of valuable information, in the mistaken attempt to make his laborious investigations fit for popular reading.

It would be inconsistent with my present aim were I to give a translation or even an abridgement of this omitted and unknown chapter of Beckmann's history. Besides, I am not able to produce any of the works he refers to, and in these notes I am dealing only with books and editions which I have seen, and the majority of which have also been exhibited to the Society, but one or two of his remarks may be quoted and a short list given of the early histories which he describes at some length.

He begins by arranging writers on the history of inventions in five classes, viz. :—

1. Those who have compiled general works.
2. Those who have composed histories of inventions among particular peoples, or in particular countries or towns.
3. Those who have composed histories of inventions during particular epochs.
4. Those who have composed histories of inventions in particular arts and sciences.
5. Those who have composed the history of individual inventions, or of some few inventions.

Beckmann, reviewing these groups, says that for a certainty the writers who have contributed least to our knowledge of the subject belong to the first class. Just because they have tried to do everything, they have succeeded but indifferently—if at all—in doing anything. One can easily comprehend how to a man of the endless research and painful thoroughness of Beckmann, the second-hand learning and superficiality of some historians would be almost repulsive. Severe though the remark be, however, it is correct, for no one can devote to all discovery the labour

and time necessary to write the history of it from original investigation. On the contrary he who confines himself to special subjects and exhausts them is most likely to remove mistakes, to dissipate prejudice, to add permanently to the sum of knowledge. Beckmann's practice accords admirably with his criticism, for he has taken up separate inventions and brought together all that he knew about their origin and progress, and has thus left a great store of most curious information, which at the present time is almost entirely forgotten.

He next gives a bibliography of the history, for, as he says, no one had previously attempted it.* He enumerates ten different treatises, the first nine of which are unknown to me, though with the tenth I was already acquainted before seeing it in Beckmann's essay. The following is a brief list of these works:—

1. *Teatro de gl' inventori di tutte le cose*, by Vincenzo Bruno. Naples, 1603. Small folio, pp. 291, besides preface and index.
2. *De gl' inventori di tutte le scienze et arti*, by Luigi Contarini. This seems to form part of a collection of essays by Contarini: *Il vago e dilettevole giardino*, of which various editions appeared at Vicenza and Venice from 1597 to 1683.†
3. *De originibus rerum libellus*, by Guglielmo Pastregico or Pastrengo. Venice, 1547. 8vo.
4. *Veruni inventum, hoc est, munera Germaniæ*, by Michael Maier. Franckfurt, 1619. 8vo, pp. 249. A German translation appeared at the same place in the same year.
5. *The history of the principal discoveries and improvements in the several arts and sciences*. London, 1727. 8vo, pp. 307. This work was translated into French, in 1767, by Marc-Antoine Eidous, and from the French into Italian, Turin, 1786.

* This is not quite correct, for several of the writers mentioned by Beckmann had been enumerated by Antoine Teissier, a century earlier, in his elaborate *Catalogus Auctorum qui Librorum Catalogos, Indices, Bibliothecas, Virorum Litteratorum Elogia, Vitas, aut Orationes Funebres, Scriptis consignarunt*. Geneva, Samuel de Tournes, 1686. 4to.

† Since writing the above I have got a copy of this book. It forms a small quarto of 12-488-56 pp.; it has the Aldine anchor on the title page, and was printed at Vicenza in 1589. It is, therefore, of an earlier edition than any of those mentioned by Beckmann. The work is a curious collection of historical details on a variety of topics. The essay on the Arts occupies pp. 417-431, and it is, as Beckmann describes it, the barest of lists, without order and criticism. It looks just like a set of jottings taken down while reading to help the memory, and intended possibly to be filled up afterwards. It may be added that the author calls himself *Contarino*.

6. *Kurze Geschichte der merkwürdigsten Entdeckungen . . . in allen Wissenschaften und Künsten*. Osnabrück, 1784. 8vo. This collection was written by Beckmann himself.
7. *Dictionnaire des origines, ou époques des inventions utiles*. Paris, 1777. 6 vols. 8vo. The author's name was D'Origny. Beckmann speaks in a depreciatory way of this work. There is a copy in the library of the Royal Institution, London.*
8. *Curieuse Nachricht von Erfindungen und Erfindern der Wissenschaften, Künste und Handwerken*. . . . Hamburg, 1707. 12mo, pp. 167.
9. *Libellus de rerum inventoribus*, by Johannes Matthäus. Hamburg, 1613. 8vo, pp. 76.

On these writers and their works, Beckmann makes a few critical and descriptive remarks, to which I must refer those interested in the subject, as I am unable to add anything to them at present.

Respecting the tenth writer mentioned by Beckmann, some observations may be mentioned supplementary to what he has said.

The historian alluded to is Polydore Vergil,† who was born at Urbino in Italy about 1470, studied at the University of Bologna, and came to England in 1503 in the train of Cardinal Corneto. He was sent by Pope Alexander VI. to collect Peter's pence, but after his mission was accomplished remained in England, and became successively Prebendary of Lincoln, Archdeacon of Wells, and Prebendary of St. Paul's. After the long period of forty-seven years he returned to Italy and died in 1555, probably at Urbino. He wrote several books, that by which he is best known being the history of England. It aroused much controversy, and he was accused of having falsified facts and having made away with historical documents.‡ The book, however, which concerns us more immediately, *De inventoribus rerum*, the first of its kind,§ was printed at

* *Catalogue*, London, 1857, p. 265.

† Notices of Polydore Vergil are to be found in the biographical dictionaries and histories of literature. Those, however, who wish to stir the ashes of a fiery discussion, long-ago gone out, may turn to Bayle (*Dictionnaire Historique et Critique*, Rotterdam, 1702, iii. p. 2978), whose pages contain ample references to the old writers.

‡ Tiraboschi (*Storia della Letteratura Italiana*, Firenze, 1810, vii. p. 1015) declines to believe this story, and Sir Henry Ellis also defends Vergil from the attacks made on him. (*Three Books of Polydore Vergil's English History*. Edited by Sir Henry Ellis. London, Camden Society. 1844.)

§ There is a book by Zacharias Lilius *De origine et laudibus scientiarum*, printed at Florence in 1496. I have not seen any account of it, and do not know how its theme is treated.

Venice in 1498 or 1499, and it too seems ultimately to have provoked strong feeling, for it was condemned by the Council of Trent and was put in the *Index*. After the first there followed an extraordinary number of editions and translations, a few of which are given by Freytag, Grässe, and Brunet. By far the fullest list, however, was compiled by Beckmann, which, on account of its curiosity, on account of its existing nowhere in English, so far as I know, and on account of my having some of the more interesting editions to exhibit, I am tempted to quote. Beckmann keeps the chronological order for both the Latin editions and the translations—I have separated the latter for convenience of description, and have added some editions with which Beckmann was not acquainted. These are distinguished by an asterisk.

* <i>Sine anno</i> ¹	Paris.	Senant.	1536	Basil.	8	Bebelius.
* 1498 ²	Venet.	4° { Christoph.	1537	Paris.	4	Stephanus.
		{ De Pensis.	* 1544 ⁵	Basil.	8	Isingrinus.
1499	Venet.	4 De Pensis.	1545	Basil.	8	Isingrinus.
* 1502 ³	Paris.	4 { Augrain and	1546 ⁶	Lugd.	8	Gryphius.
		{ Bignet.	1546	Basil.	8	Isingrinus.
1503	Venet.	4 de Tridino.	1548	Lugd.	8	
1509	Argent.	8 Schürer.	1554	Antv.	8	
1512	Argent.	4 Schürer.	* 1555 ⁷	Basil.		
<i>Sine anno</i>	<i>Sine loco</i>	Schürer (?)	1557	Gandav.	8	
1516	Argent.	4 Schürer.	* 1558 ⁷	Basil.		
1516	Paris.	4 Petit.				
1517			1558	Lugd.	8°	{ Gryphii hæredes.
1521	Basil.	fol. Frobenius.	1558	Lugd.	8	Tornæsius.
1525	Basil.	fol. Frobenius.				
* 1528 ⁴	Paris.	4 Stephanus.	1561	Lugd.	12	{ Gryphii hæredes.
1529	Paris.	4 Stephanus.	1563	Basil.	8	Guarinus.
1532	Basil.	8 Bebelius.	1566	Lugd.	8	

¹ *Catalogus Librorum Impressorum Bibliothecæ Bodleianæ*. Oxon. 1843, iii. p. 712.

² Grässe, *Trésor de livres rares*, Dresden, 1867, VI. ii. p. 283. *Catalogus . . . Bibl. Bodl.*, 1843, iii. p. 712.

³ Grässe, *Ibid.* Brunet, *Manuel du Libraire*, Paris, 1864, v. col. 1136.

⁴ Renouard, *Annales de l'Imprimerie des Estienne*, Paris, 1843, p. 29.

⁵ Glasgow University Library.

⁶ Freytag, *Adparatus Litterarius*, Lipsiæ, 1755, iii. p. 497.

⁷ *Catalogue of the General Library of the University of Aberdeen*, Aberdeen, 1874, ii. p. 673.

1570	Basil.	12	Guarinus.	1606	Argent.	8
1575	Basil.	8	Guarinus.	1609	Genev.	8
1576	Romæ	8		1613	Argent.	16
1585	Rom. (?)			1618	Argent.	8
1586	Lugd. Bat.	12		1626		
1590		12	Stoer.	1626	Colon.	8
1599	Francof.	12		1644	Lugd. Bat.	12 Hegerus.
* 1600 ⁸	Col. Agripp.			1671	Noviomagi	12 Smetius.
1604	Genev.	16		1671-72	Amstelod.	12 Elzevirius.
* 1604 ⁹	<i>Sine loco</i>	16	Stoer.	1726 ¹⁰	Colon.	8

It was translated into the five chief modern languages :—

Into French—

1521	Paris	fol.	1576	Paris	8°
1544	Paris	8°	1576	Lyons	8
1544	Paris	16	1582	Paris	8

Into German—

<i>Sine anno</i>	Franckfurt	8°	1603	Franckfurt	8°
1537	Augspurg	fol.	1615		8
1544	Augspurg	fol.	1624	Franckfurt	8

Into Spanish—

1550	Antwerp	12°	1599	Medina	4°
------	---------	-----	------	--------	----

Into Italian—

1543	Venice	8°	1587	Florence	4°
1545	Venice	8	1592	Florence	4
1550	Venice	12	1680	Brescia	4

Into English, by Thomas Langley—

1546 Jany.	Lond.	8°	Grafton	(1570 ?)	Lond.	8°	Tisdale.
1546 Apr.	Lond.	8	Grafton	1659	Lond.	12	
1551	Lond.	8	Grafton	1663	Lond.	12	
1562	Lond.	8		1868	New York		

The edition of 1562 is quoted by Beckmann on the authority of Ames, *Old English Printers* (?), p. 275.

In spite of these 80 (?) editions and translations, Polydore Vergil's treatise is not common. Whether it is that there is no demand for it, or

⁸ *Catalogue of the Printed Books in the Library of the Faculty of Advocates, Edinburgh, 1878, vi. p. 693.*

⁹ Glasgow University Library.

¹⁰ It is just possible that this list contains duplicates, for, without having actual copies to collate, mistakes may be made.

that the editions are actually worn out and consumed, it is but seldom that it appears in catalogues. A further proof of its rarity is that the large libraries contain comparatively few editions, judging, at least, by their catalogues.

The Advocates' Library contains only the Cologne edition of 1600 and a Spanish translation printed at Medina, without date, neither of which is mentioned by Beckmann.

The Aberdeen University has the editions of 1544, 1555, 1558, Leyden 1644, and Amsterdam 1671.

In the Bodleian Library are the following:—Paris, without date, 1498, 1545, 1554, 1561, 1606, 1644, 1671; the Italian translation of 1545; the English of 1546; and Tisdale's, without date.

The Royal Institution has the Basil edition of 1521; the Nimwegen edition of 1671; and the English edition of 1659.

There is a fair representation of the editions in the British Museum. The following dates are taken from the catalogue in the reading-room:—1499, 1503, 1509 (this is queried in the catalogue, from which I infer that the date is obliterated or defective), 1521, 1525, 1532, 1545, 1557, 1561, 1570, 1576, 1586, 1604, 1606, 1651; Neomag. 1671; Amst. 1671. Of the translations there are the following:—French, 1521, 1544; German, 1544; Italian, Venice, 1543, 1550-1; Florence, 1587; Brescia, 1680; English, 1546, 1551, and Tisdale's. Also the edition of 1659, and the New York reprint of 1868.

Of these, I examined the 1576 and the so-called 1651 copies, and three of the English versions. That of 1576 is the authorised Papal edition.* It is a small 8vo, printed in italics, and contains 48—478—2 pp. It has a notice: *Gregorius Papa XIII. ad futuram rei memoriam*, explanatory of the origin of this revised and expurgated version.

As the 1651 copy purports to have been printed at Amsterdam by Daniel Elzevier, and as I had seen no reference anywhere else to such

* No other is allowed: "*Nisi fuerit ex impressis ab anno 1576, juxta editionem Romæ factam jussu Gregorii XIII. App. Ind. Trid.*" *Index Librorum Prohibitorum*, Romæ, 1758, p. 286.

an edition, I examined the Museum copy, and found, as I anticipated, that it was not really printed in that year. In the first place, the name of *Daniel* Elzevier, as a printer, did not appear by itself till 1664; in the second place, neither the author of the "*Essai*" nor Willems mentions any copy of Vergil as printed by *Louis* Elzevier in 1651. In the third place, the actual copy does not agree with itself: on the engraved title the date is apparently 1651, but on the printed title the date is apparently CIO IOC LXII. Closer inspection, however, shows that in the first title 7 has been scraped out and 5 written in, and in the second title that an x has been scraped out and 1 written in. In short, this volume—which bears the book-plate of *Mr. Le Cher. De Fleurieu*—is merely a copy of the 1671 edition with the dates altered. What could have been the object in altering them, it is hard to say, but at any rate the thing has been clumsily done.

Sir Henry Ellis is the only authority who, I have since found, mentions this 1651 edition. His list contains some twenty of the editions, but it is not very accurate. He gives a Leyden edition of 1544, and an Amsterdam one of 1571, which dates are doubtless misprints for 1644 and 1671 respectively. He also quotes editions by Daniel Elzevier, 1651 and 1662. As both these dates are impossible, and, curiously enough, are the dates on the British Museum copy, I have little doubt that they have been taken from it. The quotation of them, therefore, by Sir Henry Ellis, merely proves that this copy has been in the Museum for the last forty years, and that its spurious dates have hitherto escaped detection.

From my own and the University collections I am able to put before you a not less interesting, and with the exception of the Museum's, a larger series than any of the preceding. Comparison of these works enables me also to point out some variations in the current descriptions of some of them, which may be of use to those who may hereafter examine the editions more minutely than I am able to do at present.

There is here a copy of the edition of 1499 which is usually called the first. It is the only edition mentioned by Hain (*Rep. Bibliogr.* No. 16008), by Beckmann, who, however, does not appear to have ever seen

it, and by Freytag.* But Grässe, as we have already seen, quotes an edition of 1498 by the same printer, and gives besides the price of a copy, and there is apparently a copy in the Bodleian Library. On the other hand, Panzer (*Annales Typographici*, Norimb. 1796, vol. iv. p. 451, No. 2355) says: *spuria est haec editio*; and again (vol. iii. p. 456, No. 2495) he calls the 1499 edition: *unica Seculi XV*. In face of such opposing statements, and in the absence of opportunity for comparing the 1498 and 1499 editions, it is impossible to say whether there are really two editions or not. I confine myself, therefore, to facts and offer the following description of the edition of 1499:—

F. 1r Title: POLYDORI VERGILII VR | BINATIS DE INVEN | TORIBVS RE- | RVM LIBRI | TRES. | *F. 1v* Polydori Vergilii Vrbinatis ad Lodouicum Odaxium | Patauinum Præfatio. | *The preface ends on f. 3v, followed by the table of contents which ends on f. 6v, followed by the words LAVS DEO.* | *F. 7r with sig. b,* POLYDORI VERGILII VRBINATIS DE | INVENTORIBVS RERVM LIBER PRI- | MVS INCIPIT. | *F. 88r* Polydori Vergilii Vrbinatis de Inuentoribus rerum opus | Magister Christophorus de Pensis impressit Venetiis An | no humanitatis Christi. M.CCCC.LXXXXVIII. | Pridie Kalendas Septembris. |

It is a small quarto printed in Roman character, with signatures a⁶, b—k⁸, l¹⁰; 88 leaves in all, with 29-30 lines in a page.

The next copy is from Sir William Hamilton's collection, and is of the edition of 1503. It also was printed at Venice, but by Joannes de Cereto de Tridino. It is very nearly an exact reproduction of the preceding.

The following is an account of it:—

F. 1r Title in black letter: † | Pólydóri Vergilii Vr- | binatis de inuento | ribus reru3 li | bri tres. | *F. 1v* Polydori Vergilli (*sic*) Vrbinatis ad Ludouicum Odaxiū Pa- | tauinum Præfatio. *The preface ends on f. 3v. The table of contents then begins:* Polydori Vergilii Vrbinatis de Inuentoribus rerum. | ¶ Capita primi libri: | *and ends f. 6v* LAVS: DEO | *F. 7r with sig. b,* POLYDORI VERGILII VRBINATIS DE IN- | VENTORIBVS RERVM LIBER PRIMVS IN- | CIPIT. | *Ends f. 81v* ¶ Impræssum Venetiis per Iohannem de Cereto de Tridi- | no alias Tæuinum. Anno domini. M.CCCCC.III. Die De | cimo- tertio Iulii. |

It is a small quarto, printed in Roman character, with signatures a⁶,

* Freytag, *Adparatus Litterarius*, Lips. 1753, ii. p. 1244.

b—k^s, l⁴; 82 leaves in all, of which No. 82 is blank; 29-30 lines in a page.

The first of the German editions, and the next in order, was printed by Matthias Schürer at Strasburg in 1509.* I have a copy here; the title page is as follows:—

POLYDORI VERGILII | VRBINATIS | DE | INVENTORIBVS | RERVM LIBRI | TRES. |
 M. ANTONII SABELLICI DE AR | TIVM INVENTORIBVS | ad Baffum carmen
 | elegantissi- | mum. | AD LECTOREM. | Grammaticæ, Orator, Poeta, Philo-
 sophe, Medice, | Iurisconsulte, Theologe, quisquis demū | es, Polydorum
 legito, vt prima | tuæ artis incunabula, | ab ipsa (vt aiunt) | stirpe agno | scas. |
At the end: Argentoraci, in officina Matthiæ Schürerij Helue- | tensis. Art Doct.
 Mense Decembri. | Anno. M.D.VIII. | REGNANTE CAES. | MAXIMILIANO |
 P. F. AVG. |

It is a small quarto, with six preliminary leaves unnumbered, and LXVI. leaves numbered. It has headlines and signatures, but no catchwords, and it is printed in Roman character.

These three earliest editions contain only the first three books of the history of inventions. The remaining five books did not appear till the edition of 1517, of which, however, I have no copy, and have observed no description. Thereafter the different editions which I have seen contain the whole eight books.

This is the case, for example, in that printed by Stephanus at Paris in 1528-29, about which Beckmann gives no particulars, and of which the British Museum and Bodleian have no copies. The title page states that it contains the three books of the former edition revised and enlarged by the author, and in addition five books relating to the history of Christianity and the religions of other nations. To this edition there is prefixed a letter dated 1517, from the author in London to his brother in Urbino, which tells us how it was he came to England, and how he wrote his history at the request of Henry VII. This curious letter is not contained

* This edition is described by Freytag, *Adparatvs Litterarius*, Lips. 1753, ii. p. 1244. He says: "Hæc editio satis rara, et nisi fallimur, omnium prima est, quæ in Germania lucem vidit." He points out that it was unknown to Maittaire, and goes into a number of other details, for which I must refer to the article itself.

in any of the later editions which have come before me, and it gives Stephanus' edition a peculiar value.*

Of the remaining copies, two printed at Basil by Isingrinus in 1544 and 1546 respectively have nothing specially interesting about them, and the same may be said of the Italian translation of 1550. All three are in italics, and as specimens of printing are well enough. The 1544 edition is not mentioned by Beckmann. The copy here is from the University Library. From the same is a copy with date 1604. It was printed by Stoer, but where is not said. Beckmann specifies a Geneva edition of the same date, but whether these two are identical I do not know. Stoer's edition, besides containing Polydore Vergil's eight books, has also Sardi's tract, to be referred to below, and extracts from Pliny and other writers on the history of inventions. It forms a fat little volume in 16mo. From the Hamilton collection I have a copy of the Cologne edition of 1626. This is a reprint of the 1576 edition, and, on the title, purports to agree with that licensed by Gregory XIII. It also contains Sardi's tract.

Two more of the Latin editions are here. The first is that printed at Leyden in 1644 by Hegerus, and the other is the Elzevier edition of 1671, both in 12mo, both with the same very curious engraved title, illustrative, so far as I understand it, of the influence of printing. About the value of this edition of Elzevier's opinion is divided. One writer says it is the only one sought after by the amateur,† whereas Willems says frankly:—"L'ouvrage est assez peu recherché et n'a qu'une valeur médiocre," an opinion which was expressed in similar terms some sixty years earlier by the author of the anonymous work on the Elzeviers. Whether this be so or not, the edition is not one of the least costly; though at the same time it is one of the least readable.‡

* Two editions were issued by Stephanus; the first, containing three books, has the date 1528; the second mentioned above has 1528 on the title, but in the colophon: 1529, VI. Idvs Ianvar. See Renouard, *Annales ... des Estienne*, Paris, 1843, p. 29, No. 21, and p. 32, No. 24.

† *Biographie Universelle*, Article *Polydore Vergil*.

‡ *Essai Bibliographique sur les Editions des Elzevirs*, Paris, 1882, p. 115. It is No. 1464 in Willems' Catalogue—*Les Elzevier*, Bruxelles, 1880, p. 375, where also Hegerus'

I have still three copies to exhibit, which are for us perhaps the most interesting of all.

One is a copy of the first English edition printed by Grafton in 1546; it is mentioned but not described by Ames. It is unnecessary, therefore, to apologise for the following account:—

¶ An Abridgemēt of the | notable worke of POLIDORE | VERGILE conteyngnyng
the deui- | sers and first finders out aswell of | Artes, Ministeries, Feactes & |
ciuill ordinaunces, as of | Rites, & Ceremonies, | commonly vsed | in the
chur- | che: and | the | originall beginnyng of | thesame. Compē- | diously
ga- | thered by | *Thomas Langley.* | ¶ IMPRINTED AT LONDON | vvithin the
precincte of the late dissol- | ued house of the grey Friers, by Ri- | charde
Grafton Printer to the | Princis grace, the .xxv. daie | of Ianuarie, the yere
of | OVR LORDE, | M.D.XLVI. | *Cum priuilegio ad impri- | mendum solum.* |

It is a small octavo, printed in black letter; has 8 preliminary leaves, with signature *A*, containing title and preface to Sir Antony Denny. On the verso of *A8* is a woodcut:—the Prince of Wales' feathers, coronet and motto, with initials E. P., all surrounded by a glory or tongues of flame; text, clvi leaves numbered; on the verso of clvi is Grafton's emblem of a grafted tree growing up through a barrel or tun; table, 10 leaves not numbered, with signatures *b v* to *x vi*; the imprint on the title-page is repeated on *x vii*. This copy seems to want the last leaf, which may contain the emblem repeated. The pagination is somewhat irregular on two or three sheets.

The copy now before me is from the Euing collection, and is in very fine condition. It has a note on the fly-leaf, signed with the initials "J. O. H.," stating that copies of the January issue of 1546 are much rarer than those of April, and that in the British Museum there are two copies of the latter, but none of the former. My observation, on the contrary, is that the Museum has a copy of this edition, but that it is imperfect, wanting *A8* and all after *x iiiii* of the table at the end. There is in the Museum a copy of the 1546 edition, with January on the title-page and April in the colophon. This again differs in some

edition is referred to as an antecedent in the Elzevier style. The Nimwegen edition of 1671 seems from Freytag's account to run these very close in typographical neatness, but I have not seen it.

details from the edition which has April on the title, and a description of which is given by Ames. To his account, as I have no copy to show, I must refer those who wish to compare it with the first issue.*

Five years later Grafton printed another edition, which is described by Ames, *Typ. Ant.* III., p. 474, No. 1504. I have a copy here:—

An abridge- | ment of the notable worke | of POLIDORE VERGI- | LE conteinyng
the deuisers and | first finders out aswell of Artes, | Ministeries, Feactes and
ciuil | ordinaunces, as of Rites, | and Ceremonies, com- | mōly vsed in the
chur- | che: and the original | beginnyng of the- | same. Compen- | diously
ga- | thered | by | Thomas Langley. | 1551. | *Mense Iulij.* |

It is a small octavo, printed in black letter; has 8 unnumbered leaves, containing title, dedication, and Grafton's device of the seven liberal arts; text, cxxxv numbered leaves, which number, however, is a printer's blunder for cli, followed by 6 leaves of Table, not numbered, and a seventh leaf with this colophon:—

Imprinted | at London, by Ri- | chard Grafton, Prin- | ter to the Kynges | Maiestie. |
Anno. 1551. | Cum priuilegio ad im- | primendum solum. |

and Grafton's device again on the reverse. The folio-numbering, as before, is a little irregular.

In his account of this edition Ames, with his editors Herbert and Dibdin, makes statements which do not tally with the copy here. He says it "contains 155 leaves besides the preface and a table at the end"; the same thing is repeated by Lowndes, but, nevertheless, I believe they are all wrong. Owing possibly, to the last leaf being mis-numbered 135, while the previous one is 150, they seem to have assumed that the correct number is 155. If their copy contained really 155 leaves and was otherwise similar to the one before us, there must have been four leaves interpolated. The signatures, however, in my copy are quite regular and run direct from the text into the index, so that there is no room for extra leaves. From the imperfect collations in the *Typographical Antiquities*, it is impossible to tell how many leaves not numbered a book may contain.

* *Typographical Antiquities*, edited by Dibdin, Lond. 1816, 4to, iii. p. 431, No. 1462.

Of the last of these editions I have a copy from the University Library. It also is described by Ames, *Typ. Ant.* iv., p. 350, No. 2463.

The following is an account of it:—

An abridge· | mente of the Notable | worke of Polidore | Virgile. | Conteing the
deuisers and fyrste | fyneders oute aswell of Antyqui· | ties, Artes, Ministeries,
Feactes | and ciuill ordinaunces [as] of the | Rites, and Ceremon[ies co]m· |
monlye vsed in the [chur] | che: and the original | beginning of the | same. |
Compendiouslye gathered | and newlye perused | by *Thomas Langley.* |*

The title is enclosed in a border. It is a small octavo, printed in black letter, has 8 leaves not numbered; clii leaves numbered, and Table 14 leaves; on verso of last leaf of table is the colophon:

Imprynted at | London by Ihon Tisdale | dwellyng in Knight | riders streate, neare
to | the Quenes | Wardrop. | *with a figure below.*

Folio 15 contains Tisdale's device: a drawing of Abraham sacrificing Isaac, with the angel and the ram.

The title of this edition, it will be observed, differs in one or two points from those already given, so that when Ames quotes merely the first few words and adds, "as in vol. iii., p. 451," meaning by that the same as the 1546 edition, he is wrong. In other respects his account tallies with the copy before us.

It is perhaps superfluous to remark that like early printed English black-letter books in general, these different editions have become scarce and valuable.

In the year 1663 there was published an edition of Polydore Vergil's works, edited by J. Langley, which I have not seen. The text of this edition, which is apparently modernized, was made the basis of a reprint (limited to 120 copies) by the New York Agathynian Club, of whose transactions it forms No. 2. It was printed at New York in 1868, and forms a handsome volume. The editor, W. A. Hammond, gives a short account of Vergil, but he does not seem to have been aware of the very great number of the editions, or to have seen any of the early English copies.

* The copy from which this title is taken has a defect in the title-page, which is represented by the portions enclosed in square brackets,

It is impossible to look at the unprecedented number of editions of Polydore Vergil's work without trying to assign a cause for it. Doubtless the novelty of the subject, the boldness of the author, and his suspected orthodoxy were the main attractions, for it was the first attempt to write the history of the invention of the arts and sciences and to trace the growth of religious ceremonies; and though the information is not, and indeed could not be very well digested, it was a great help to scholars to have it brought together in any form.* The dedication quoted above in Schürer's edition "*to the reader, whatever he might be,*" is probably the true explanation of the popularity of the work. Before parting with the author for the present, I would say that if one had ample opportunity for following it out, a complete bibliography of Polydore Vergil's work would be interesting and curious, and well worth the trouble of compiling.

We may pass now to some other historians of the arts, for Beckmann's list of ten does not include the whole of them. Teissier, already referred to, besides several of those quoted above, mentions Gilbertus Cognatus, who wrote a tract on inventors, printed at Basel in 1547.†

Another was written by Alessandro Sardi or Sardus, who was born at Ferrara about 1520, and died there March 26, 1588. He was a keeper of the archives, and spent a retired and laborious life of study, which was his sole passion. His tract is entitled, "*De rerum inventoribus Ll. II. ... iis maxime quorum nulla mentio est apud Polydorum, u. pr. in lucem editi.*" It first appeared, along with another work of the author, "*De ritibus gentium,*" at Mayence in 1577, and is not in the first edition of that work printed at Venice in 1557. It was afterwards printed along with Vergil's work, and it is contained in the 1604 and 1626 editions already shown, and in the Nimwegen ‡ and some other editions as well. Of this work there is here a French translation by Gabriel Chappuys, printed at Lyons in 1584, and forming a small thin volume. I have

*Tiraboschi (*Storia* vii. p. 1015) is rather hard upon the work. He calls it "libro che mostra la molta erudizione, e insieme la poca critica e la credulità del Vergilio."

†It was also reprinted with Polydore Vergil in the 1626 and possibly other editions.

‡Freytag, *Adp. Litt.*, Lips. 1755, iii. p. 499 and p. 286.

not noticed this translation in any of the bibliographies or library catalogues which I have consulted.

Exactly a century after Polydore Vergil's history, appeared that of Guido Pancirollo. The author was born at Reggio, April 17, 1523, and became professor of law at Padua, and afterwards at Turin. He died June 1, 1599.* He wrote a number of works on law and other topics, and in addition the one connected with our present subject. It is entitled

Rerum Memorabilium libri Duo: quorum prior deperditarum, posterior noviter inventarum est. Ex Italico Latine redditi & notis illustrati ab Henrico Salmuth.

The Italian, if it exist, must be in MS., for I have not noticed any printed edition of it. The Latin passed through several editions; the following dates may be given:—Amberg, 1599-1602; 1607-8, 2 vols. 8vo, 1629; Franckfurt, 1617, 2 vols. 8vo; Franckfurt, 1630, 1631, 1646, 1660, all in 4to; Leipzig, 1707.

It appeared in French, translated by Pierre de la Noue, and titled: *Les antiquitez perdues*, Lyon 1608, 8vo, Lyon 1617, 12mo; in Italian: Venice 1612, 4to; and in English: London 1715, 2 vols. 12mo, and 1727, 2 vols. 12mo.

Of the different editions, I have seen those of Franckfurt, 1631, 1646, and 1660 in Latin, and the 1715 English translation. The first three all belong to the same edition, but in re-issuing the book with new dated title-pages, four pages have been omitted in the first part, and eight in the second. The edition of 1631 is therefore the most complete. Pancirollo's work is interesting, not only as giving some notion of the state of knowledge as to the history of invention in his time, but as displaying the attitude of scholars towards the practical arts of the ancients.

There seems to have been a belief last century that the claims of the ancient world to practical skill and scientific invention had received

* An account of Pancirollo and a list of his works are given by Nicéron, *Memoires des Hommes illustres*, Paris, 1729, ix. p. 183.

but scant justice at the hands of most writers. To vindicate the reputation of the ancients in this field of human effort was the occasion of the publication by Louis Dutens of a work entitled *Origine des découvertes attribuées aux Modernes*. Dutens' work first appeared at London in 1769 in 8vo; thereafter in French, at Paris, 1776, 2 vols. 8vo; London, 1796, 4to; and again at Paris, 1812, 2 vols. 8vo; and it was published in Spanish at Madrid, 1792, 4to. Of these, the first is in the Hunterian Library, and the third in the Hamilton Collection. The author does not restrict the field he traverses, but endeavours to show, from allusions in ancient writers, and remains of the works of the ancients, that many things which were supposed to be entirely of modern origin, were really well known to the ancients. However easily such a thesis might be maintained in Dutens' time, it is not one which could even be thought of at the present day, and yet we know far more of the knowledge and practical skill of the ancients, and can estimate it more correctly and value it more highly than could be done by Dutens, or any of his contemporaries. The fact is, however able the ancients may have been, they could not have had the practical inventions of the present day; and the same remark is true even for Dutens' time. Ignorant of the composition and properties of matter as Europe was a hundred years ago when compared with to-day, it still knew more than the ancients, and that knowledge caused discoveries to be made which were beyond the power of the ancient world to conceive. To do Dutens justice, however, it should be admitted that, though he has short chapters on the invention of glass, of acids, of alkalies, of distillation, and some other technical subjects, his work is mainly an attempt to show that philosophical and moral and social ideas were to a large extent anticipated by the ancients—a point which can be more readily granted. But, withal, Dutens' book is feeble. It is a gentle ground-swell after the Temple-Wotton-Bentley hurricane of the previous century.

A book of a more purely antiquarian and historic character had been composed by Rollin about the beginning of last century. It forms part of his great treatise on the ancients, and was contained in the complete English translation published in 1736. Afterwards it was printed

separately, but was almost lost sight of, till it was reprinted at Glasgow in 1837. It is well known as Rollin's "*History of the Arts and Sciences of the Ancients.*" Like the work of Goguet formerly mentioned, both Dutens' and Rollin's investigations have been completely superseded. The works of Dutens and Goguet, however, have one merit at least; they contain good lists of the authorities cited.

It is hardly necessary even to refer to an essay by David Hume on the "Rise and Progress of the Arts and Sciences." This title promises much, but the performance is so disappointing that it is useless to include it in a list of writings on the subject. It may, therefore, be passed over.*

Long as the list of historians has become, and it is still incomplete, I see no cause to alter my opinion that the history of invention is still to write. One may even go farther and say that the history is now so immensely more difficult to grasp, that one may despair of ever seeing it written. Interesting as it is, it has become too technical and scientific ever to attract the unskilled reader, and there are—at the present time at all events—no skilled persons willing to sacrifice the practice of the arts to recording their progress; but if the history of invention and discovery is in future attempted, it must—if it is to be of any value—take one or other of the limited shapes formulated by Beckmann a hundred years ago.

2nd. Turning now to the collections of Secrets, or the Receipt-books themselves, there are a few new ones here to be seen, as well as some other interesting editions of those already mentioned. They may be taken, as formerly, in chronological order.

A new edition of the work of Theophilus † is now publishing in Vienna. It forms one of a series of original works illustrative of the history of art and of the technical part of art during the Middle Ages and Renaissance.

* Among the arts, by far the most important in Hume's eyes were polite conversation and gallantry, if we may judge by his devoting eleven pages out of thirty-one of this essay to accounting for their probable origin. Had he but lived to read the letters collected and edited by M. de Laclos, he would have deplored their having become exact sciences, as being "not half so valuable," to quote his own words.

† *Transactions*, ii. p. 183. [Reprint, 1896, Part I. p. 7.]

The first division appeared in 1874 under the title, "*Schedula Diversarum Artium*," edited by Albert Ilg, who has prefixed a long account of the different manuscripts, and discussed a number of questions as to Theophilus and his treatise. It contains a critical Latin text, with various readings, and a translation into German. The second division has not yet appeared, so far as I know.

The same series contains another monkish mediæval treatise, also edited by Ilg, and published at Vienna in 1873. The author lived between the 8th and 10th centuries, and his work is entitled "*Heraclius de Coloribus et Artibus Romanorum*." It does not confine itself, however, merely to colours and their preparation, but includes illumination, gilding, niello-work, and other kinds of art.

On the previous occasion reference was made to the "*Speculum*" of Vincent de Beauvais as the biggest book of the Middle Ages, but no visible proof of the fact was forthcoming. By the two volumes now shown, which contain the "*Speculum naturale*" only, and make up but a fourth part of the entire work, every one can judge by very simple inspection, that if it be not the biggest, it must be very near it. Although these volumes do not bear any date or imprint, they are known to have been printed by Johann Mentellin, the first printer at Strassburg, about the year 1473. The "*Speculum historiale*," which I have also, and which is bound in two even larger volumes, has Mentellin's imprint and the date 1473. In any case the book is a magnificent specimen of fifteenth century work, whether as regards the paper, the type, the ink, or the impression. But, besides, no one can look at it without being awestruck by the enormous labour of the author, and the patience and conscientiousness of the printer. It is a matter of surprise how Hain, who is usually so accurate, has altogether passed over the different fifteenth century editions of Vincent de Beauvais' work.* One is, in consequence, deprived of the

* Hain (*Repertorium Bibliographicum*, I. i. p. 358) gives "Bellovacensis (Vincentius) v. Vincentius Bellovacensis," but on turning to vol. II. ii. p. 494, where Vincentius ought to be, the name is wanting. Hain must have forgotten the cross reference entirely. Cornelius a Beughem (*Incunabula Typographiae*, Amst. 1688, p. 143) gives a short notice of Vincentius, and mentions several editions of the work, but does not specify that of

opportunity of comparing collations with him, and thus of ascertaining whether all the copies are alike; but, in consequence, a description of the book is all the more necessary, as I am not aware of any in English. The following applies to the present copy:—

Vol. I. *F. 1r, col. 1*, Incipit speculū naturale Vincentij beluacēss | fratris ordinis p̄dicatorum.* Et primo p̄logus d' | causa suscepti op̄is et eius materia. Primū | *This contains the prologue and contents of the whole 33 books and occupies from f. 1 to f. 21, verso, ending on col. 1, line 42. F. 22r, col. 1, 'i' De diuersis mūdi acceptionibus. Ex | libro qui dicitur imago mundi. The volume ends on f. 368v, col. 2, which has only 13 lines. The two concluding lines are: quo pacto simul omes eo quo venerant agmine | redeunt. |*

Vol. II. *F. 1r, col. 1*, 'xxxix' Continentia libri dēciminoni. | *to f. 8v, col. 1, line 25. F. 9r, col. 1, 'j' De opere sexte diei. Et primo de anima | libus. Guillerinus de conchis. | The volume ends on f. 327v, col. 1, which has 27 lines. The two concluding lines are: perstricta sunt. sed latiore in fine sp̄culi hysto- | rialis. p̄patescunt. Amen. |*

It is in large folio, semi-gothic character, double columns, with 66 lines each, and it has no numbering of leaves or pages, no signatures, catch-words, place, date, or printer's name.

Of Mentellin's edition there is a copy on vellum in the National Library, Paris,† one (I presume on paper) in the Bodleian Library,‡ and one in the

Mentellin's. He calls the *Speculum* "*ingens opus.*" Watt (*Bibliotheca Britannica*, ii. 935) calls it "a work of vast labour, and the largest perhaps printed in these primitive times." It is curious that Watt should have used such a phrase when speaking of the year 1473.

* As it is impossible without special types to give the contractions of the original, italic letters have been used merely to show where contractions occur.

† Van Praet, *Catalogue des livres imprimés sur vélin de la Bibliothèque du Roi*. Paris, 1822, iv. p. 290. No. 451. As this work contains the only actual collation of a copy which I know, for Burnet (*Manuel de Libraire*, 1864, v. col. 1253) simply repeats Van Praet, errors and all, I may remark that the collation agrees in every respect with my copy except in three points. Two are minute: in vol. I., f. 22r, col. 1, line 6, Van Praet gives *architipus* for *archetipus* in the original; in vol. II., f. 9r, col. 1, line 1, Van Praet reads, "'ij' De opere sexte diei," for "'j' De," etc. The third is all-important: Van Praet says the first volume contains 318 leaves, which is repeated by Brunet. This is certainly wrong; my copy contains 368 leaves. Leaf 318 falls about the middle of Book 16, and the volume contains 18 books, as Van Praet himself says.

‡ *Catalogus ... Bibliothecæ Bodleianæ*, Oxon. 1851, [Suppl.] p. 964.

British Museum. I have not observed a copy in the catalogue of any other library which I have had an opportunity of consulting.

In the Hunterian Museum I have found a copy of another edition of the *Speculum naturale*.

Vol. I. *F. 1r, Headline: Prologus | F. 1r, col. 1, Incipit speculum naturale Vincentij be- | luacensis fratris ordinis predicatorū. Et pri | mo prologus de causa suscepti operis et eius | materia. Ca. Primum. | The prologue ends on f. 4r, col. 2; the contents of the thirty-three books then begin and go down to f. 18v, l. 38, the matter being equally distributed between the two columns; then last line: Registra Expliciunt. | F. 19 blank. F. 20r, Headline: Liber Primus | F. 20r, col. 1, De diuersis mūdi acceptōibus Ex libro | qui dicitur imago mūdi. Ca. 1. | Vol. ends f. 317v, col. 2, l. 20: eo quo venerant agmine redeunt. | f. 318 blank.*

Vol. II. *F. 1r, col. 1, Cōtinētia deciminoni libri | ends f. 7v, col. 1, line 21. F. 8r, Headline: Liber Decimusnonus | F. 8r, col. 1, De opere sexte diei. Et primo de animali | bus. Guillerinus de conchis. C. 1. | Vol. ends f. 280r, col. 2, l. 55. The last two lines are: stilo ꝑstricta sunt sed latiore in fine speculi hystorialis | perpatescunt Amen. | F. 280v. blank. Is there a leaf, 281, containing the register? If so, it is wanting.*

This edition is in large folio, Gothic character, double columns, 67-69 lines in each, besides headlines to each page; there is no numbering of leaves or pages, no signatures or catchwords, no date, place, or printer's name. It is a splendid book, but hardly equal to Mentellin's.

For the present I omit Albertus Magnus, of whose work, *De Secretis*, I might show several editions, but a passing reference may be made to one of its modern adaptations alluded to at the close of the former part. It is in Dutch, and bears this title: "*De Wonderbare Geheymen, van den groote en klyne Aalbert in 3 deelen,*" Paris, 100,000. It appears to have been at one time sewn up round the outer margin, but whether to prevent the wonderful secrets getting out of it, or a prying police getting into it, may be left undecided. It seems, however, from the apparently fictitious place, and certainly fictitious date, to have been sold under some sort of supervision or restriction. It is difficult to see the reason for this, for the book contains such gross nonsense that the wonder is, how it could find a purchaser at all.

We may pass, therefore, to a more important person, Bartholomew

Glanville,* of whose work, *De proprietatibus rerum*, I have found six copies in the Hunterian Museum—two printed, and four in manuscript. It may be observed here that the previous statement, on page 186 (Reprint, 1896, Part I. p. 9), to the effect that the first edition of the work appeared in 1478 is not correct. The first edition with a date is of 1480, referred to in the note on the same page. The copy there mentioned is a particularly fine one, and it corresponds with the account of the book as given by Hain. One of the Hunterian copies is of 1482, and corresponds with Hain's No. 2503. Hain, however, had not seen a copy of it, for he gives no collation, and his account is obviously copied from some other writer. The following, therefore, may be useful as filling a gap in the list of fifteenth century books:—

Folio 1, which is blank, is wanting. F. 2r, with sig. a2, Incipit p̄hemium de p̄prietatibus rerū | fratris Bartholomei āglici de ordine fra | trum minorum. The book ends on f. R11r, Explicit tractatus de p̄prietatibus rerū | editus a fratre Bartholomeo anglico or- | dinis fratrum minorum. Impressus sub | anno domini Millesimoquadringentesi- | moctuagesimosecundo. die vero decem- | bri x. | Finis. | Laus deo. | f. R11v blank. f. R12r, Registrum |

It is a small folio, printed in Gothic character, with headlines, and signatures a—q, A—R, 278 leaves in all. It is without pagination, place, or printer's name, and without catchwords. It is in two columns, with 54-55 lines in each, and headlines. This is not quite so fine a book as the previous edition of 1480.

The second Hunterian copy is the English translation reprinted by Berthelet. The title page is as follows:—

ANNO M.D.XXXV. | BERTHOLOME | VS DE | PROPRIETATI | BVS | RERV. |
LONDINI IN AEDIBUS THO- | MAE BERTHELETI RE- | GI IMPRESSORIS. | CVM
PRIVILEGIO A RE- | GE INDVLTO. | *At the end:*

* In *Trans.* ii. p. 186, the author's name is misprinted Granville. In Stirling's Library there is a copy of the 1488 edition which I have not collated. In Trinity College, Cambridge, there is a copy of Koburger's edition, 1492. See *Catalogue of the Fifteenth-Century printed Books in . . . Trinity College, Cambridge*, by Robert Sinker. Cambridge, 1876, p. 32, No. 122. For very full lists of the editions both of Albertus Magnus and of Glanville, reference may be made to the Rabelaisian work of James Atkinson: *Medical Bibliography*, London, 1834.

¶ Endlesse grace, blysse, thankyng, and | praysinge vnto our lorde god Omnipotent | be gyuen, by whose ayde and helpe this | translatiō was ended at Berkeley the .vi. | daye of Feuerer, the yere of our lorde. M. | CCC.lxxxxvii. the yere of the reyne of king Rycharde the seconde after the Conqueste | of England. xxii. The yere of my lordes | age, syre Thomas lorde of Berkeley, that | made me to make this Translation. xlvi. | And printed by me Thomas berthelet, the | xxvii. yere of the most victori' reine of our | mooste grations (*sic*) soueraygne lorde kyng | Henry the viii. | Finis. |

It is a small folio, printed in black letter, with 8 preliminary and CCCLXXXVIII numbered leaves, double columns, 50 lines, and headlines. The numbering is irregular. This is a beautiful book, and probably well deserves the encomium passed on it by Lowndes, that it was the finest work executed by Berthelet.

The manuscript copies are all on vellum. Three are in Latin, in double columns, with coloured capitals and conventional scroll ornaments. The fourth is a copy of Jean Corbichon's French translation, of which the first edition, with a date, was printed in 1482. The MS. is in large folio, double columns, with illuminations, and delicate sketches for others which the artist never finished.*

Old manuscript receipt books may occasionally be met with. They contain usually very miscellaneous matter; the commonest are collections of practical, medical, and cookery receipts. There are three such collections here. One is a small volume in Italian and French, written on paper in a very beautiful and almost microscopic hand. The second is a collection of medical and pharmaceutical receipts in German, written in various hands, and belonging apparently to the 17th century. The third is in English, and is concerned with chemical receipts. It is of date 1649.

Of the printed collections referred to in the first part of this paper, I am able to show some other editions.

In the Hunterian Museum there is a fine copy of Gohory's translation of Levinus Lemnius' *De Secretis*. The title may be given in full:—

Les | Oeevltres | Merveilles et | Secretz de Natu- | re, avec plusieurs enseigne- | mens
des choses diuerses tāt | par raison probable que par | coniecture artificielle :
expo | sées en deux liures de non | moindre plaisir que proufit | au lecteur

* I observe Dibdin mentions this MS. *Northern Tour*, Lond. 1838, ii. p. 735.

studieux. | Par | Leuin Lemne Medecin Zirizeen, & | nouvellement traduit de
 Latin en | François, par I. G. P. | Auec deux tables, l'vne des argu- | mens
 des chapitres, l'autre des | singulieres matieres d'iceux. | A Orleans, | Par
 Pierre Trepperel. | 1568.* |

It is a 16mo, with 17 leaves not numbered, and the eighteenth numbered 18, 250 numbered, and index, 20 not numbered. The title is enclosed in a woodcut border. I. G. P. is the translator's usual method of indicating himself: "Jacques Gohory, Parisien." This, like Gohory's other works, is a very rare book. Of Levinus' work in Latin, there is a copy of the Antwerp edition of 1581 among Sir W. Hamilton's books, now in the University Library.

In addition to the different copies of the Treasure of Evonymus, formerly mentioned, I can now show the first edition of Zurich, 1554. It is a very elegant book, much superior to any of the subsequent editions I have seen.

Of the Secrets of Alexis, which was once so popular a collection, three copies may be added to those formerly shown. One is of date 1560, and was printed at Basil by Perna; the second—from the Hamilton Collection—at the same place, in 1563; and the third is a German translation, printed in 1573, without place or printer's name. These three all bear to have been edited by Johann Jacob Wecker, who subsequently compiled a more systematic work on Secrets. In 1616, at Basel, Wecker published a little volume in German, entitled *Kuntstbuch ein nutzlicher Büchlein von mancherleyen künstlichen Wassern, ölen vnd Weinen*. The waters, oils, and wines for preparing which Wecker gave these receipts, were intended for medical purposes chiefly.†

There is an Italian version of Meurdrac's chemical receipts, and there are here also two editions of Neri's Art of Glass, one in Latin, Amsterdam, 1668, and a German translation by Geissler, Franckfurt, 1678.

A reprint of Gabriel Plattes' *Discovery of Subterranean Treasure*, with

* On p. 187 above [Reprint, 1896, Part I. p. 10], it is said erroneously to have been printed at Paris.

† Wecker was born at Basle in 1528, learned and afterwards taught medicine there, but removed to Colmar in 1566. He compiled several works, and his wife wrote a cookery book.

additions, was published at London in 1738, and another volume of Metallurgical Secrets, translated from the German of Silberman into French, at Paris in 1773.

I have also a copy of Falloppio's Secrets, in German, printed at Augspurg in 1588, if not the first edition of the translation, at all events an early one.

When mentioning Fioravanti's collection of Medical Secrets,* I was not aware that there was one by him on the Arts. I have not the original, but I have found that Gabriel Chappuys, already referred to as the translator of Sardi's tract, published a French version. The copy which is here is of the second edition, and bears date, Paris, 1586.

Besides those already referred to, the Hamilton collection possesses the Hanau 1619 edition of Baptista Porta's *Magia Naturalis*, and the Basel 1662 edition of Wecker's own work, *De Secretis*, to which may be added that of Basel 1613, and the French version, printed at Rouen in 1663. All of these are in 8vo. They are of no special interest, except as showing the number of such books in circulation a couple of centuries ago.

The preceding are merely additions to those formerly exhibited. Those which follow are collections not alluded to before.

In the first part attention was directed to a number of little books of art receipts, all apparently taken from one common source. The oldest version then shown was dated Augspurg, 1537. I have here one printed in 1531. It is entitled :

Rechter Gebrauch d' Alchimei, mitt vil bissher verborgenen, nutzbaren vnd lustigen Künsten, nit allein den für witzigen Alchimismisten (*sic*), sonder allen kunstbaren Werckleuten, in vnd ausserhalb feurs. Auch sunst aller menglichen inn vil wege zugebrauchen.

It is a small quarto of xxvii numbered leaves, without place or printer's name. On the title page is a vignette of a jeweller's (?) shop. All the receipts in this are included in the 1537 edition, which, however, is a somewhat larger collection. To a corresponding extent, the receipts in

* *Transactions*, ii. p. 191.

this are to be found in the various issues of Andréé's *Kunstboeck*.* About a century later, in 1613, there was published at Franckfurt a small volume, entitled :

Alchimia, Das ist, alle Farben, Wasser, Olea, Salia, vnd Alvmina, damit man alle Corpora, Spiritvs vnd Calces præparirt, sublimirt und fixirt, zubereyten. Vnd wie man diese ding nutze, auff dass Sol vnd Lvna werden möge.

Though this is the title page, the running title of the book is: "*Rechter gebrauch der Alchimey, mit viel bissher verborgen, nutzbaren vnnnd lustigen Künsten, nit allein den Alchimisten, sondern allen Kunstbaren Werckleuthen, auch sonst allermeniglich in viel wege zugebrauchen.*" It forms a small octavo volume of 130 pages, and four of index and colophon. It was given to the world by a certain Petrus Kertzenmacher of Mayence, who prefixed an address to the reader as to the value of alchemy in the arts, but he does not either claim or disown the authorship. The fact is, however, that not the second title only, but a considerable part of the contents is taken direct from the 1531 edition. Of Kertzenmacher's work, if really by him, I have here, besides the edition of 1613, a late reprint dated 1720, and a copy in MS. in a small 8vo volume of 119 leaves, written in the 17th century. It becomes, therefore, a little difficult to adjust the relationship of these different collections, of which, beginning with that of 1531, eight have been now exhibited.

In the year 1616 appeared a work by the famous Vanini, who was consigned to the flames at Toulouse in 1619 for atheism. It is a treatise on the secrets of nature, and belongs therefore to the first class of such books.† It is in the form of a dialogue, and in it Vanini expounds his views as to the economy of nature. It is a much less famous book than the author's *Amphitheatrum Æternæ Providentiæ*, which appeared at Lyons in 1615, but at the same time it is very much rarer.

A collection of medical secrets:—*Sommaire de la Medecine Chimique, . . . Avec un Recueil de diuers secrets de Medecine*, was printed in 8vo

* Lowndes (*Bibliographer's Manual*, Lond., 1865, vol. iv. p. 2235) speaks of a "*Book of Secrets*," translated by W. W. P. from the Dutch, London, 1596, 4to. This I have not seen; is it a translation of Andréé's collection?

† *Transactions*, ii. p. 183. [Reprint, 1896, Part I. p. 6.]

at Paris in 1632, and another different collection :—*Recueil des plus beaux Secrets de Medecine . . . comme aussi plusieurs secrets curieux sur d'admirables effets de la Nature & de l'Art*, appeared at Paris also in 1695. Chemical, medical, pharmaceutical and natural secrets were collected also by a Martin Schmuck, and published under the title—“*Secretorum Naturalium, Chymicorum, & Medicorum, Thesauriolus*,” at Schleusingen in 1637. Besides it there are here editions of 1652-53, and one of 1686.

Another collection was printed at Hamburg in 1689 by Gottfried Schultz. The compiler has not revealed his name, and it is a pity, for his work is a thoroughgoing receipt-book, and a typical specimen of its class. Its long-winded title page may be condensed, however :

Schatzkammer rarer und neuer Curiositäten, in den aller-wunderbahresten Würckungen der Natur und Kunst, Darinnen allerhand seltzame und ungemene Geheimnisse, bewehrte Artzneyen, Wissenschaftten und Kunst-Stücke zu finden. . . . Der dritte Druck, jetzo mit dem dritten Theil von vielen Chymischen Experimenten und anderen Künsten vermehret, deme angehenget ist ein Tractat, Naturgemässer Beschreibung der Coffee, Thee, Chocolate, Tabacks, und dergleichen.

This work is of the most comprehensive and catholic description, including medicines, perfumes, fireworks, painting, fishing, colouring of marble and paper, extirpating of noxious insects, gardening, gilding, and what not.

Just the reverse in character of the preceding is the famous work of Weidenfeld, “*Concerning the Secrets of the Adepts*,” of which there are at least four editions, for they are here, namely, London 1684, Hamburg 1685, Leipzig 1768, all in Latin; and London 1685, in English. The secrets of the adepts are treated very discreetly, and the author restricts his attention mainly to one—what was called Raymund Lully’s Spirit of Wine, believed to be the substance now known to chemists as acetone. The book, however, contains besides some preparations for medical use and a chapter on transmutation; but instead of the descriptions revealing the secrets, they seem to involve them in still deeper obscurity. Considering that the book deals with secrets of chemistry in a very secret way, Weidenfeld’s may be called in every sense a “Secret Work.”

Of what may be called truly modern works on the Arts, the oldest

and most important is the *Lexicon Technicum*, compiled by Dr. Harris, F.R.S., and published about the beginning of last century. For a long time it was the principal book of its kind, and it passed through several editions. In the University Library there is a copy of the first(?) edition, 1704-10, in two volumes folio, closely printed in double columns, and with numerous illustrations. It is a very interesting book.

In 1735 there was published at London a *Dictionarium Polygraphicum* in two octavo volumes. This work is intermediate between that of Dr. Harris and the *Polygraphice* of Salmon, mentioned in part one, to which indeed in several respects it bears a notable resemblance. These are not mere receipt-books, but rather technical encyclopædias, giving the rationale as well as the practical execution of a process or an art.

At a later date in 1777 came the *Dictionnaire des Origines* in six volumes, of which I regret there is no copy to put before you, and thereafter we pass into the later literature, which is beyond our province. For purely modern treatises on the arts one must consult the classified catalogues of special libraries, such as that of the Royal Institution, or—which is of more interest to us—of the Philosophical Society here, and such books of reference as Schubarth's and Bruno Kerl's *Repertorium der Technischen Literatur*.

In what has now been said, the older literature is not by any means exhausted; of editions alone there are plenty to be seen in catalogues which have not been quoted, simply because there were no copies to put before you; but doubtless there are still other collections of receipts and secrets, with which I am unacquainted even by name, but which would reveal themselves to any painstaking investigator. Enough, I hope, has been quoted to show the extent and variety of this literature as evidence that our predecessors were not so indifferent to the practical arts as we are apt to suppose. Hereafter, should I meet with other works of special interest on the subject, I may take the liberty of bringing them under the Society's notice.

Since finishing these last words, I find more last words are necessary to dispose of a score of works and editions which have in the meantime

drifted into view. Their appearance shows the accuracy of what has just been said: that the older literature is not exhausted.

Two copies of Goguet's history I had overlooked in the University Library. One is of the 1758 edition in six small volumes; the other appeared in 1820, and is called the sixth edition. One could hardly have supposed that this work would have passed muster even in 1820. Though professing to be revised, it is merely a reprint, and even as such it is a poor production, the plates especially being of the shabbiest.

Beckmann's second class of histories is well illustrated by a tract of the Italian antiquary and printer Dominico Maria Manni, *De inventis Florentinis*, published at Ferrara in 1731. When one thinks of the notable men whom Florence can claim—architects, natural philosophers, discoverers, artists of every kind—it will be seen that the author had a rich field to work. It is a pity that he has not made more of it, but the time for the proper cultivation of it was hardly come. This book seems to be very little known.

In 1737 Abbé Goujet wrote an essay on the state of the sciences in France from Charlemagne to King Robert. It has the merit of being brief, and since it gained the prize of the French Academy, the student of the history and philosophy of the history of science has an opportunity of comparing what was reckoned best in 1737 with more recent dissertations on similar topics. This essay belongs to both the second and the third of Beckmann's classes.

One ought almost to apologise for having omitted all mention of the histories of mediæval art by M. Jules Labarte. They are works of such acknowledged merit on goldsmith's work, on carving in wood, ivory, wax, and metal, on enamelling, pottery, glass, armour, and such like branches of the arts of decoration, that the mere mention of them is all that is required. That which is best known is the history which appeared in one volume some thirty years ago, but there is besides the very sumptuous work on the industrial arts, published in 1864, and again in 1872. These may be taken as examples of Beckmann's third class of histories.

There are still three copies of Glanville to consider. The first is of

the edition of 1488, referred to in the note [*Trans.* ii. p. 248], see above, p. 24, as being in Stirling's Library. I have now collated that copy, and as I can confirm Hain's account (No. *2507) further description is not at present necessary.*

The second is a copy of the Strassburg edition of 1485. Hain's collation (No. *2506) in this case also is confirmed by comparison with an actual copy, so that it does not need to be repeated. In the copy I have had before me the only difference is in certain blank leaves. In Hain's copy there was a blank leaf between the table and text; in my copy this leaf is wanting, but there is a blank leaf at the end, which was wanting in Hain's. In all other respects Hain's account agrees.

The third copy is one of the French translation, and as no account of it is forthcoming, I may give the following:

F. 1 is blank. F. 2r, with sig. ii, Headline: Prologue | Then in long lines: Cy commence vng tres excellent liure nomme le proprietaire des choses translate de latin en frã | coys a la requeste de tres crestien et tres puissant (sic) roy charles quint d ce nom adonc regnant en france | paisiblement, | lequel traicte moult amplement de plusieurs notables matieres comme on pourra app- | ceoir par les prologues qui sensuyent | Large woodcut depicting the presentation of the translation to the king. Then col. 1, Le prologue du translateur. | () Treshault z tres puissant prince charles par la di- | uine pouruoiance de dieu | &c. ends f. 3r, col. 2, Cy finist le prologue de l'acteur. | F. 3v, col. 1, Cy commencent les rubri | ches de tout ce present liure. | Table ends f. 8r, col. 2, Cy finist (sic) la table | 8v, blank. F. 9r, with sig. a., Headline: Le premier liure de Dieu | then in long lines: Cy commence le premier liure du proprietaire au quel tant seulement est traicte de la sainte trini | te et vntite diuine avec ses noms et proprietes | Woodcut. Then col. 1, Le premier chapitre qui est de dieu. | (e) N couuoitait aulcu | nes choses declairer | des proprietes z des | natures &c. At the end: () Estuy liure des proprietes des choses | translate de latin en francois la de | grace. M.CCC.lxxii. par le commã | dement de tres puissant et noble prince Char | les le quint de son nom regnant en ce temps en | france paisiblement. et le translata son petit et | humble chapellain frere iehan corbichõ de lor | dre saïnc (sic) augustin, maistre en theologie de la | grace et p̃mociõ du dit prince et seigneur tres | excellēt et a este reuisite par uenerable z discre | te personne frere pierre ferget docteur en theo | logie du couuent des augustins de lion. et impri | me audit lieu de lion par hõnorable hõme mai | stre Iehan cyber maistre ẽ lart de impression |

* In the copy in Stirling's Library leaf Si is wanting.

It is a large folio of 252 leaves, printed in Gothic character, with signatures in eights, double columns, except the table which is in three columns, and some of the headings which are in long lines. There are 54-56 lines, besides head-lines, and there are 20 large rude woodcuts. There is no date, but it was printed about 1495. This is one of the later editions of Corbichon's translation, of which a MS. in the Hunterian Museum has been already referred to. It is just mentioned by Hain (No. 2513), who had seen no copy, and very little is said about it by Brunet. It may be entitled, therefore, to rank as one of the rare books of the fifteenth century; and it is rare, probably because, being in the vernacular it was much read, and the copies were gradually used up. Of these three editions the last is undoubtedly the finest. The other two are common-looking, and obviously were got up to meet a demand for the book in a cheap shape. Not one of the Latin copies I have seen is so handsome as the first edition of 1480. It may be noted that Glanville's work is supposed to have had a place in Shakspeare's library, which may give it additional interest to readers of English and antiquaries.

Of Alessio's Secrets an edition earlier than any which have yet been noticed is in the Euing collection. It is called the second edition, and was printed at Lyons so long ago as 1558. It is a small volume in 16mo, and contains only the first part of the collection.

Another edition of Wecker's Secrets has also turned up. It appeared at Basel, and is one of the most respectable copies I have seen. Usually the work is printed badly on spongy paper stained with foxing, so that it is quite a relief to meet a copy like the present on firm fair paper. It is a mere re-issue, however.

To Kertzenmacher's list must be added an edition of the *Alchymia*, which appeared at Frankfurt in 1589. It has the rude plates of apparatus, the two titles, and Kertzenmacher's preface. This, again, is the earliest copy I have seen, but there may be others still earlier.

Another Italian collection of Secrets revealed, like some of those already mentioned, by a lady, Isabella Cortese, was published at Venice in 1625. As it is a new and revised edition, there must be others still earlier, but these I have not encountered. This is a very miscellaneous collection, but as

might be expected, the cosmetic art bulks largely in it. It is proverbially hard for a woman to keep a secret, so that it is not to be wondered at that Mlle. Meurdrac, Signora Cortese, Frau Wecker, and I suppose others, found it impossible to keep several score.

Other books distinctly on the same subject, besides Liebaut's already noticed, may be mentioned. One I know only by Nodier's reference to it.* It is the treatise of André Fournier: *La décoration d'humaine nature et aornement des dames*, printed at Paris in 1530, and now of extreme rarity. Another, however, I have seen. It is entitled *De Decoratione*, was written by Hieronymus Mercurialis, and was first printed at Venice in 1585. The edition I have was printed at Franckfurt the year following. The most interesting thing about this second edition is that it contains in an epistle to Mercurialis, dated Bologna, Feb. 22, 1586, the first account by Tagliacotius of his method for the restoration of noses, one of the branches of surgery, which is fairly entitled to rank among both the decorative and useful arts.

Another treatise on the personal decoration of the female sex was written by Sir Hugh Plat of Lincoln's Inn in 1602. This is a work I regret my inability to get, for I should like to have been able to disclose some of the secrets in use two and half centuries ago, as well as to have ascertained how the author came by his information. Of the same Sir Hugh, there are two works which may be included here. One is the first edition of his *Jewell House of Art and Nature*, printed at London by Peter Short † in 1594, of which a later issue was quoted in the first part of the present notes. As usually happens, the first edition is a much more interesting book than that of 1683. Besides its age, it has some curious ornamental title pages to recommend it to the book-fancier, and it is printed more legibly, which may be in its favour with those who still believe that books are only for reading. At the end of this volume Sir Hugh tabulated a few important inventions which he was keeping to himself as valuable secrets, but which he had no objection to reveal to any one really interested in them. A few years later, in 1603,

* Nodier, *Description . . . d'une jolie collection des Livres*. Paris, 1844, p. 50, No. 130.

† Peter Short seems to have been the scientific publisher of his day. Besides this work of Plat's, he was the printer of the first edition of Gilbert's book *De Magnete* and of Gesner's *New and Old Phisicke*.

Peter Short printed for him another tract containing at length a description of one of those inventions, to which he must have attached considerable importance. The tract is in small quarto, and is entitled, *A new, cheap and delicate fire of Cole-balles*, and so far as I know, is the description of one of the earliest endeavours to economise fuel and diminish smoke. The invention consisted in mixing pounded sea-coal with sawdust or other combustible matter, adding a certain proportion of loam, and working the whole into round balls, which were placed in the grate to be burned. There is a vignette on the title page representing a grate or fire-place with a fire of these balls in it. This, I suppose, is one of the scarcest tracts of the author.

Half a century and more after Plat came another inventor, to whose book it is very difficult to assign a place. I refer to the Marquis of Worcester, one of the most ingenious men of any time, who, however, did not commit to paper more than the mere titles of his inventions. Within the last dozen years they have been brought prominently before the notice of the curious in these matters by the elaborate work of Mr. Dircks, to which any one wishing to know about the Marquis will go. This work contains not only a reprint of the *Century of Inventions* itself, but a long biography, and an introduction and notes to the *Century*, in which a well-deserved castigation is administered to Messrs. Horatio Walpole and David Hume for their attempted criticism of the inventions. There is a list of the editions also, but this is neither so complete nor so detailed as a bibliographer would desire.

Whoever wishes the full flavour of the Marquis' inventive ideas will read them in the first edition—if he can get it. It is a tiny duodecimo, printed at London in 1663, and is now become scarce. Nor are the two Glasgow editions at all common, though printed a century later. One of these has the date 1767, and the imprint of R. and A. Foulis, the famous Glasgow printers; the other 1792, and the names of Duncan and Chapman. This last edition is not mentioned by Dircks. Partington's edition of 1825 is a pretty and handy book, but it is inferior as an edition.* All these, as well as

* There are two ludicrous errors on p. 36. *A propos* of a universal alphabet Partington refers to the proposal of "George Dalgarno, an Englishman," published in London in 1661. He means George Dalgarno, who was born in Old Aberdeen, and studied at Marischal College, and afterwards had a school at Oxford. Anthony a Wood calls him a "Scot," as indeed what else could he be?

Dircks' own edition, are contained in the University library, so that those who wish it have a fair command of available information about the author.

Passing to another division, that of Medical Secrets, one may be mentioned for the benefit of those who may be more lucky than myself in getting a copy. It is entitled *Les Fleurs et Secrets de Médecine*, translated from the Latin into French by Raoul du Mont Vert, and printed in a small black letter volume about 1520. This contains not only many wonderful things about medicine and physiology, but treats also of comets and of the magnitude of the sun and the heavens, so that it is altogether as fascinating a book as one could wish for a winter evening.

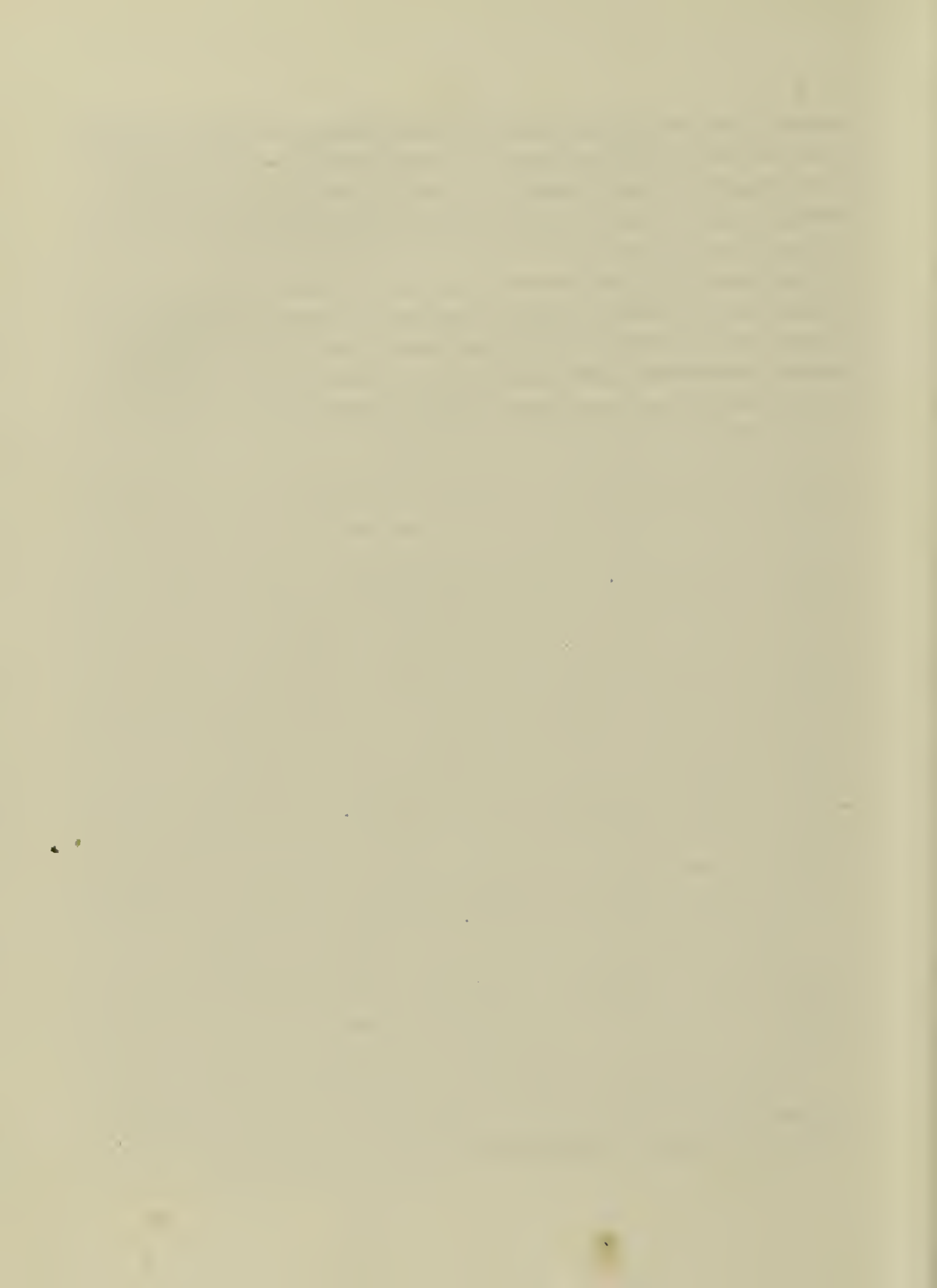
Among the voluminous writings of that previous person, Alexander Ross, there is one entitled *Arcana Microcosmi; or, the hid Secrets of Man's Body discovered; in an Anatomical Duel between Aristotle and Galen, concerning the Parts thereof*. The duellum begun between these two ancient sage philosophers is carried on in the later parts of the book between Ross himself and his distinguished contemporaries William Harvey and Dr. Thomas Brown; Ross objecting to some of Harvey's views about generation and circulation, and confuting some of Brown's own errors respecting vulgar errors. The discussions are not of much importance now, but the way in which they were conducted is not without interest at the present day. Whoever reads the *Arcana* will see that the difference of opinion arose from imperfect knowledge or absolute ignorance of the facts, and that suppositions and fancies too frequently put on the appearance of realities. When one reads the biological discussions between rival schools in the scientific journals of 1883, doubt unbidden will arise in the mind of the non-partizan onlooker as to whether the parties engaged in the modern anatomical duel know their facts any better than Ross and his contemporaries did theirs.

Of the books of Secrets there is a set which I have tried to avoid, though a few have been quoted in the course of the preceding. These are collections of Chemical Secrets, which belong rather to the literature of that science in general than to what has been chiefly under consideration. Exception may now be made in favour of two, since they bear the name distinctly.

Raymund Lully, one of the lights of alchemy in the thirteenth century, wrote a work on the quintessence of things, under the title, *De Secretis*

Naturae. It was a popular work with the old chemists, for it passed through several editions; and it was upon this quintessence that Weidenfeld wrote his commentary, already alluded to. Of these editions three have come before me—that of Venice, 1542; Nürnberg, 1546; and Cologne, 1567; all of them desirable books.

Long after Lully, Sir Kenelm Digby, who dabbled in chemistry and medicine and Philosophy, compiled a collection of Chemical Secrets, which was published after his death by George Hartman, his operator. It appeared in 1683, was translated into German the year following, and I have seen a Dutch translation that was published in 1693 at Amsterdam.



BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART III

BY
JOHN FERGUSON, M.A.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archaeological Society of Glasgow, 18th December, 1884]

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET

1885

T. III

L. xv

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART III

BY
JOHN FERGUSON, M.A.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archæological Society of Glasgow, 18th December, 1884]

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET

1885

(100 Copies Reprinted).

BIBLIOGRAPHICAL NOTES ON HISTORIES OF INVENTIONS AND BOOKS OF SECRETS.

PART III.

BY

JOHN FERGUSON, M.A.,

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

[*Read at a Meeting of the Society held at Glasgow on 18th December, 1884.*]

THE acquisition of a considerable amount of new material has induced me to solicit once more the attention of the Society to the literature of technical receipts and "secrets," especially as several of the books to be referred to are even more curious than those brought forward on previous occasions. Among them are some, remarkable for their contents; others, attractive from their rarity; while a third set consists of first editions, always of value, as representing the works as they left their authors' hands. The notes will treat, as formerly, I. of histories of inventions; II. of books of secrets. Under the second head there will be a sub-division into, A, notes on editions of works different from those already quoted; and, B, notes on works referred to now for the first time, which will form the fourth, and, as I intend, the concluding part of this research.

I. HISTORIES OF INVENTIONS.—In the enumeration of these histories by Labbe,¹ Teissier,² and Beckmann,³ there is one, *De originibus rerum*, by

¹ Labbe, *Bibliotheca Bibliothecarum*, Rothomagi, 1678, p. 73.

² Teissier, *Catalogus auctorum qui Librorum Catalogos . . . scriptis consignarunt*, Geneva, 1686, p. 119.

³ Beckmann, *Beiträge zur Geschichte der Erfindungen*, Leipzig, 1792, III. p. 456. *Trans. Archæol. Soc. Glasg.*, 1883, II. p. 231.

Gulielmus Pastregicus, printed in 1547. Having come into possession of a copy of it, I have been led to make some inquiries about the writer, but have failed to find anything in detail about him in English books of reference. It is not surprising, however, that his name has been passed over, for Tiraboschi¹ says that it was hardly known in Italy, while beyond that country it was as good as unknown; he might have added that even in Italy, last century, his very existence was called in question.²

He was born at Pastrengo³ early in the fourteenth century, and may have belonged to the illustrious family of the Guarienti. He tells us that he studied jurisprudence under Oldrado da Lodi, a distinguished lawyer, and he ultimately acquired the posts of notary and judge, which he filled at Verona. In 1335 he was despatched to Pope Benedict XII. at Avignon, from Mastino

¹ Tiraboschi, *Storia della Letteratura Italiana*, Firenze, 1807, Tomo V. p. 401.

² This seems to have been done by Signor Francesco Arisi. His averments were criticised and shown to be quite erroneous by the editor of the *Giornale de' Letterati d'Italia*, Venezia, 1713, Tomo XV. p. 198, sqq. The editor quotes several earlier Italian authorities who have mentioned and commended Pastrengo, and he also refers to his book. It is remarkable that Tiraboschi has taken no notice of this article, but has given Maffei—whose work, *Verona Illustrata*, did not appear for twenty years after—the credit of having been the first to recover Pastrengo's name from oblivion and to show how highly he was to be esteemed for his efforts in literature and history.

³ Beckmann (*Beyträge*, Leipzig, 1792, III. p. 456) says: "He was called Pastregicus, Pastregius, Pastrengus, Pastergicus, and Guglielmo Pastrengo, from the little village of Pastrengo, which in Jonson's map: Territorio di Verona, is situate on the Adige, between Verona and the Lago di Garda." From a more minute account of its location by Schreiner (Erseh and Gruber's *Allgemeine Encyclopädie*, Leipzig, 1840, Sect. III. Th. XIII. p. 216), one gathers that it lies on an eminence of the same name, in a valley separated from that of the Adige by a ridge, three-quarters of a German mile from the lake, and two German miles from the capital. This agrees fairly well with the position assigned it in Spruner and Menke's *Hand-Atlas für die Geschichte des Mittelalters und der neueren Zeit*, Gotha, 1871-80. Map No. 28.

According to the article in the *Giornale*, XV. p. 200, it is a village in the province of Verona, not very far from Pesentina on the Adige. It was in this neighbourhood that the estates of the Guarienti lay. Our author is sometimes erroneously considered a native of Verona, while Maffei has fallen into the opposite mistake of distinguishing him from *Gulielmus Veronensis orator*, as he is styled by Petrarch. With regard to the different forms of his name, it may be observed that Maffei and Tiraboschi call him Guglielmo da Pastrengo; the *Giornale*, Guglielmo Pastrengo; and Montfaucon (*Diarium Italicum*, Paris. 1702, p. 48), Guillelmus Pastrengicus.

della Scala, the lord of Verona, and his brother Alberto, to obtain for them confirmation of the dominion of Parma.¹ On this embassy he probably became acquainted with Petrarch. Three years later he was again sent on a message from Mastino della Scala to Avignon. With his own hand Mastino della Scala had assassinated his cousin, Bartolomeo della Scala, Bishop of Verona, and he soon found it not unadvisable to make his peace with the Pope. Pastrengo was successful in this delicate mission, and got the criminal relieved from the ban under which he had been laid. While at Avignon, Pastrengo renewed his acquaintance with Petrarch. The poet having heard of Pastrengo's arrival came to Avignon, but, finding that he could not endure the pain of seeing the places associated with Laura, made his escape to Vaucluse before Pastrengo could visit him at the house where he usually resided when he ventured into Avignon. Thereupon ensued some correspondence between them, which ended apparently in Pastrengo's going to Vaucluse; and in one of Petrarch's verse epistles there is a charming glimpse of the manner in which two such scholars—just five hundred years ago—could divert themselves.² After Petrarch had been crowned at Rome in

¹ A narrative of the events will be found in brief in Sismondi's *Histoire des Républiques Italiennes*, Paris, 1818, T. V. chap. 33. Villani (*Cronica*, L. XI. cap. 30) does not speak of this embassy of Pastrengo's. That is done, however, by Maffei (*Verona Illustrata*, Verona, 1732, Parte Seconda, col. 59), and by the Abbé de Sade in the *Mémoires pour la vie de François Pétrarque*, Amsterdam, 1764, I. p. 270. Tiraboschi has pointed out this discrepancy, but thinks that Maffei had probably good grounds for his statement. From de Sade it has passed into the *Life of Petrarch* by Mrs. Dobson, London, 1797, vol. I. p. 72, and into the *Life of Petrarch* by Campbell, London, 1841, vol. I. p. 151. Misled apparently by the order of Maffei's narrative, G. M. S. Fischer, who has written the article on Pastrengo in Ersch and Gruber's *Allgemeine Encyclopädie*, Leipzig, 1840, Sect. III. Th. XIII. p. 215, has transposed the dates of Pastrengo's two embassies to the Pope at Avignon.

² The letters which passed between Petrarch and Pastrengo are to be found in the *Variarum Epistolarum Liber* of the former. Tiraboschi numbers those from Petrarch to Pastrengo, 32, 35, 36, 37, 38; and from Pastrengo to Petrarch, 31, 33, 34. In the copy before me, edited by Chaliasius, and printed: *Lugduni, apud Samuelem Crispinum, M.DCI.* 8vo, they are numbered 24, 25, 26, 30, 31, 32 (obviously misprints for 27, 28, 29), 30, 31. Besides these misprints, there are graver errors; for No. 24 and No. 30 (or, as it ought to be, No. 27) are assigned to Petrarch, whereas these two are letters from Pastrengo to Petrarch. The same mistake exists apparently in a Basil edition, and has misled Maffei, as Tiraboschi has shown. The poetical letters are addressed to *Gulielmus Veronensis orator*, and are to be found in the *Epistolarum Libri III.* contained in *Francisci Petrarchoe*. . .

1341, he resided for about a year at Parma and wrote to Pastrengo, but they do not appear to have met. In 1345, however, Petrarch saw Pastrengo at Verona, and one of the letters describes how Petrarch on his return to Avignon was accompanied by Pastrengo to the Veronese frontier, and the sorrow with which they parted. From their letters, indeed, it is plain that they were on the most affectionate terms with each other,¹ and as a further proof of it Petrarch sent his son in 1352 to Pastrengo to be educated. The last we know of Pastrengo is that he was still alive in 1361, for in the same year Petrarch sent him a letter on the death of this son. It is thought probable that Pastrengo died before 1370, for in that year Petrarch made a will in which he left some token of remembrance to every one of his friends, but among these is no mention of Pastrengo.

Apart from his connection with Petrarch, his official position in Verona, and his concern with the politics of his time, Pastrengo is known as the compiler of the first biographical and historical dictionary. Other attempts before his had been made, but they were limited in scope. Pastrengo, not ignorant of the difficulties of his task, took a much wider range, included all authors, sacred and profane, and added geography, history, and discovery. When we consider the very defective means at his command, we need not feel surprised at there being gaps and errors in his book, and at the same time we can agree with Tiraboschi and others in admiring his extensive erudition and his unstinted labour.

A manuscript of his work existed in the seventeenth century in the library of St. John and St. Paul at Venice,² and there were two manuscripts of it at Rome, which were examined by Montfaucon.

poëmata omnia, Basileae, 1541, 8vo. They are the following: Lib. II. 18 (Tiraboschi says 19); and Lib. III. 3, 11, 12, 20, 34. See also De Sade, *Mémoires pour la vie de Pétrarque*, Amst. 1764, I. p. 377, sqq.; Tiraboschi, *Storia*, Firenze, 1807, V. p. 402.

¹ Montfaucon's statement (*Diarium Italicum*, Paris. 1702, p. 48) that Pastrengo was Petrarch's teacher is considered by Maffei (*Verona Illustrata*, Parte Seconda, col. 58) and subsequent writers to be an error. Evidence of any such relationship is not forthcoming. In one of his versc Epistles (Lib. III. 34), Petrarch tried to induce Pastrengo to go with him to the jubilee at Rome in 1350, but Pastrengo was unable to absent himself from Verona.

² Tomasini, *Bibliotheca Veneta Manuscripta*, Vtini, 1650, p. 27. "Gulielmus Pastregicus, vel Pastrengicus Veronensis caudidicus de Viris Illustribus." Curiously enough he does

Two hundred years after it was composed, the work was printed at Venice in 1547, edited by Michelangiolo Blondo. The following is an account of it:

De Originibus | Rerum Libellus | Authore Gvlielmo | Pastregico Veronense. | In
Qvo Agitur De Scriptv- | ris Virorum Illustrium. De fundatoribus Vr- | bium.
De primis rerum nominibus. De | inuentoribus Rerum. De primis | dignitati-
bus. Deq; magni- | ficis Institutionibus. | Expvrgatus Omni Errorc | atq;
litura, nunc primum é tenebris eductus | in lucem, in suffragium studentium à |
Michaelangelo | Blondo, solerti rerum | exploratore. | 5 | Cum Priuilegio
P. in X. Annos.

It is a small Svo, printed in italics, contains 131 leaves numbered, and a blank leaf.

The colophon is on the recto of f. 131:

Impressum Vcnetijs per Nicolaum de Bascarinis. | Anno Domini. M.D.XLVII.

On f. 131 verso, is a letter to the booksellers and printers warning them against tampering with the printing and sale of certain books. It is dated 1547.

This book is of the highest degree of rarity. After examining all the library catalogues at my command, I can find only one other copy in this country, and it is in the British Museum. There was no copy of it in the Sunderland Library, the place above all others where one might have expected to find such a work.

Montfaucon¹—who gives the work its correct title, *De Viris Illustribus*—said that it was as completely lost sight of in Venice as if it had never existed, but having got a copy he was minded to bring out a new edition, amending

not tell its size, or say whether it is in one volume or in two. Weiss, however (*Biographie Universelle*, Paris, 1823, Tome 33, p. 113; repeated in the later edition, Paris, no date, Tome 32, p. 242), says that it is in two volumes folio, and that it contains a species of lexicon of writers, and that the second part is a historical and geographical dictionary. Blondo's edition, he adds, contains the second part only. This account of the matter is repeated by Fischer (Ersch and Gruber's *Encyclopädie*, 1840, Sect. III. Th. XIII. p. 215), who commits the error of calling the editor Blando. Brunet (*Manuel du Libraire*, Paris, 1863, IV. col. 428) also says that this MS. is in two volumes, and that Blondo's edition contains only the second part of the work. All this, however, is absolutely wrong. Blondo's edition contains this dictionary of authors—which is indeed by far the largest section—as well as that of history, geography, &c. Blondo's mistake consisted in not retaining the author's title, *De Viris Illustribus*, and this has misled subsequent writers who have probably failed to see a copy of this very rare book.

¹ *Diarium Italicum*, Paris, 1702, p. 48. This passage is repeated by Fabricius, *Bibliotheca Latina mediæ et infimæ Ætatis*, Hamburgi, 1735, L. VII. p. 474; and by Freytag, *Analecta Litteraria*, Lipsiæ, 1750, p. 662.

Blondo's errors, and collating the text with the two Roman MSS., which, however, he did not accomplish. Maffei¹ also had the intention of editing Blondo's work, but neither did he carry it out.

When Beckmann² first described the book, he said: "This rare book I myself have never seen," and he took his description from Labbe. Some twelve years later he³ stated that he had been favoured with the inspection of a copy sent him from the Ducal Library at Oldenburg, from which it may be inferred that its scarcity in Germany is as great as in this country and in Italy. Tiraboschi does not say whether he ever saw a copy or not, but from the way he speaks of the book having become *rarissima*, it may be supposed that he had not. Every writer has emphasised its rarity. I have noted but a few references to the book in English. The first is by Mrs. Dobson,⁴ who has given a more correct description of it than most writers who had access to the same sources of information as she had. The second is by Watt,⁵ to whose credit it must be written that he allowed as little as possible to escape him. The third is by Campbell,⁶ who has shown himself quite ignorant of the book, and quite ignorant of his ignorance; and the last is in a modern abstract of biography.⁷ Others there may be, of course.

The work itself is divided into six heads, as specified in the title, and the material of each is arranged in a classified alphabetical order. The first section relating to the writings of illustrious men is much the longest, but as can be supposed from the extent of the subject and the size of the book the space allotted to each name is very limited. The section on the inventors of things occupies from f. 78 to f. 90, and is even shorter than the corresponding

¹ *Verona Illustrata*, Verona, 1732, Parte Seconda, col. 60.

² *Beyträge*, Leipzig, 1792, III. p. 456.

³ *Beyträge*, Leipzig, 1805, V. p. 306.

⁴ *The Life of Petrarch*, London, 1797, vol. I. p. 73. Her account is taken from De Sade's *Mémoires*, Amst. 1764, I. p. 274.

⁵ *Bibliotheca Britannica*, Edinburgh, 1824, vol. II. 736j. Watt may have got his information from Gesner's *Bibliotheca*, ed. Simler, Tiguri, 1574, p. 260.

⁶ *Life of Petrarch*, London, 1841, vol. I. p. 152.

⁷ Woodward and Cates, *Encyclopædia of Chronology*, London, 1872, p. 1097.

section in Contarino's *Il vago e dilettevole Giardino*, formerly referred to. The notices occupy only a few lines each, and are taken chiefly from classical authorities; there is, of course, nothing that would contribute now to the chronicling of invention. But, however defective Pastrengo's work may be in plan and execution, it will always remain a notable landmark in literary history, as being one of the earliest attempts at the construction of a dictionary of the kind. Competent writers in successive periods have given Pastrengo abundant praise. Not to speak of Petrarch, who may be thought too partial, we have the judgments of Onofrio Panvini, Giambattista Peretti, Antonio Torresano,¹ and especially Maffei.² Montfaucon³ commends the work for its references to writers and to books up to its time unnoticed; Beckmann⁴ similarly for its record of books that never got into print, and of writers elsewhere unmentioned; Tiraboschi⁵ is still more flattering; Savigny⁶ says that the work is doubly interesting for legal literature. Graesse⁷ gives him a place in his great chronicle for the same reason, and a more recent allusion to him speaks of him as the representative of learning in his time at Verona.⁸

While admitting, however, all that can be said in praise of Pastrengo, it does not detract from his fame to remember that he had as his contemporary Bartholomew Glanville, and that a century earlier flourished men of as great powers, of even greater learning and of immensely greater production. The epoch of Albertus Magnus, Thomas Aquinas, Vincent de Beauvais, Roger Bacon, all living in the thirteenth century, is not eclipsed for scholarship and labour by any other in the history of science and literature.

¹ These writers are quoted in the *Giornale de' Letterati d' Italia*, Tom. XV. pp. 199, sqq.

² *Verona Illustrata*, Verona, 1732, Parte Seconda, col. 60. He not only praised the grandeur of Pastrengo's idea of a general dictionary of authors, but quotes him several times as an authority.

³ *Diarium Italicum*, Paris. 1702, p. 48.

⁴ *Beyträge*, V. p. 307.

⁵ *Storia*, Firenze, 1807, V. p. 404.

⁶ *Geschichte des Römischen Rechts*, Heidelberg, 1834, III. pp. 32-4.

⁷ Graesse, *Lehrbuch einer Allgemeinen Literaturgeschichte*, Dresden, 1843, Bd. II. Abth. III. p. 573.

⁸ Voigt, *Die Wiederbelebung des classischen Alterthums*, Berlin, 1880, Bd. I. p. 443.

In a former note¹ reference was made to a work *De origine et laudibus Scientiarum* by Zacharias Lilius, canon of Vicenza, printed at Florence in 1496, but at the time I had not seen it. I have since managed to get a copy of this very rare book.² It contains five tracts, of which that on the sciences is the first and longest. As was to be expected, those described are the so-called liberal sciences: grammar, rhetoric, poetry, history, dialectic, arithmetic, geometry, music, astrology, philosophy, medicine, botany, military affairs, civil and canon law, theology. They are dealt with very briefly and the book is partly a history, partly a catalogue and a criticism of writers on the different topics. It is intermediate between the works of Pastrengo and Polydore Vergil both in time and treatment of the subject.

Notwithstanding the numerous editions of Polydore Vergil's treatise, I have observed in catalogues only a very few copies since my last paper. One was of the edition of 1525, in folio, with Holbein's frontispiece; another, of 1546 printed at Lyons by Gryphius. I failed to get either, but by way of compensation have quite accidentally fallen in with a copy of Guarinus' edition of 1563. Guarinus apparently succeeded Isingrinus at Basel; at all events he both used the device of that printer on the title and carried on the Basel tradition, for this copy closely follows the pattern of 1544 and 1546 in size, type and general arrangement. It is not quite so handsome a book as that of 1546, but it has a decided advantage over it, from the student's point of view, in possessing a long index.

The opportunity also has offered itself to me of comparing the two editions of the expurgated version, published at Rome in 1576 and 1585 respectively. The 1576 edition was printed *Romae, Apud Haeredes Antonij Bladij Impressores Camerales*. That of 1585: *Romae, ex officina Bartholomæi Grassi*. The devices on the title page are different. The introductory epistle from Pope Gregory XIII. is quite different. In the 1585 edition, the letter of the author to Odaxius and the first leaf of the Index Caputum have been set up anew, but in the rest of the book no difference between the two editions is

¹ *Trans. Archæol. Soc. Glasg.*, 1883, II. p. 232, note ‡

² Brunet (*Manuel*, Paris, 1862, III. col. 1078), speaks of his works as rare and little known. Audiffredi (*Specimen . . . Editionum Italicarum*, Romæ, 1794, p. 348), praises the book for its appearance.

detectable until we arrive at the last leaf containing the errata, the register and colophon. The errata in the two editions are different, which would lead one to suppose that the book had been really reprinted; but this is not so: for, so far as I compared them, the errata mentioned as in the 1576 edition exist in the later edition, and vice versa. The register has been obviously reset. The colophon of the 1585 edition, however, has the imprint of Antonius Bladius and the date 1576. So that there was no attempt to conceal the obvious fact that this was the edition of nine years previous, and that, disguised with a new title page, a new date, a new letter from the Pope, and a new *table* of errata, but with the old errata in the text and with the old printer's name and old date in the colophon, the eight books of Polydore Vergil's history, *denuo recogniti et expurgati*, as the title page does not blush to affirm, were again offered to an unwilling public. The expurgated edition—which is besides as ugly as one could desire—must have proved rather dead stock when such desperate means had to be resorted to to galvanise it into life. Comparison of these two issues thus affords an interesting glimpse into some of the publishing devices of the sixteenth century.¹

I have also got a copy of the Strasburg edition of 1606. It is a compact little volume, printed by Zetzner, the well-known printer, and, in addition to the history of Polydore Vergil, contains extracts from Pliny, Sardinus and others, as in one or two of the editions formerly quoted, but there is nothing specially important about it.

Connected, however, with Vergil's work, the question of greatest interest is the date of the first edition. The difficulty I formerly had in answering it was caused by the statements of Panzer and Hain conflicting with those in the Bodleian Catalogue, and in Graesse's *Trésor*.² The former authorities give 1499 as the date of the first edition, while the latter two assign 1498 apparently to actual copies. A visit I paid this last autumn to the Bodleian Library has enabled me to ascertain among other things that 1498 assigned to the *De Inventoribus Rerum* in its catalogue is merely a misprint for 1499,

¹ For further details about the expurgated editions see the work of Dr. Reusch: *Der Index der Verbotenen Bücher*, Bonn, 1883, I. p. 154.

² *Trans. Archæol. Soc. Glasg.*, 1883, II. p. 236.

and that it has no copy dated 1498. The date, 1498, therefore, rests now solely upon Graesse's authority, and as his statement is based ultimately on a second-hand book catalogue of Weigel, it is likely that the latter has misread the rather unfamiliar form MCCCCLXXXXVIII, 1499, and taken it for MCCCCLXXXXVIII, 1498. Though I know by experience how very rash it is to deny the existence of a book which one has not actually seen, I am now convinced that there is no edition of 1498. Hain gives none, Panzer says positively that it is spurious, and I have met with no authentic copy in any library catalogue; the British Museum and the Bodleian have each a copy of 1499 only.¹ But apart from all this, the author's own history is against it. In the preface, the author, while claiming to be the first who had approached the subject, says—with a glance at Erasmus—that there are possibly others with more learning than he, who might have done the work better, as happened in the case of the proverbs "quorum libellum proximo anno Guido principi Urbini duci inscripsimus"—"a collection of which we dedicated to Guido Duke of Urbino, last year." This work, of which I have a copy, is dated in the colophon April 10, 1498.

In the letter to his brother from London, December 5, 1517, prefixed to the 1521, and also to the 1528 edition of the *De Inventoribus Rerum*, Vergil tells us that it took him nine months to compose this history. The colophon of the *De Inventoribus Rerum* is dated August 31, 1499, so that supposing he began to write it immediately after the proverb-book was out of his hands, say in May 1498, the manuscript could not have been finished before January 1499, and the printing would still have to be done. There is another obstacle in the way of a 1498 edition. The prefatory letter to Odaxius in the 1499 and 1528 editions is not dated, but in the 1544, 1546, 1563, 1585, and possibly in some earlier editions as well, it has the date August 5, 1499. In what edition this date was first inserted I do not know, but it seems to have been added by the author, in which case it would indicate that the preface of the book was finished full three weeks prior to the printing of the colophon. Consequently a few months must have elapsed between his completing the *Proverbiorum Libellus* and his beginning the *De Inventoribus*

¹ It may be added that Reusch (*Der Index der Verbotenen Bücher*, Bonn, 1883, I. p. 154) calls the edition of 1499 the first.

Rerum, and this space of time sufficed to give him a notion of the popularity of his first literary attempt, which was what spurred him on to make a second. These considerations seem to me to prove definitely that an edition of 1498 does not only not exist, but never could have existed.

In the Bodleian¹ I had the opportunity of collating the edition printed by Senant at Paris early in the sixteenth century. It is the first-mentioned edition in the list already given by me;² and as I know of no description of it anywhere, one may be introduced here for the convenience of subsequent investigators.

Fol. 1 a Title: Polidori Vergilii | Vrbinatis de Inuentoribus Rerum | Libri Tres operosissima nuper | cura emēdati & seueriore | Lima q̄ accuratissime | expoliti |
 Followed by Senant's device, consisting of a large square woodcut of a tree with two birds in the branches, and below it two men with cross bows. Round three sides in black letter are the words: En le monde fault bien | tirer Qui en | Paradis veult monter | and at the bottom: Oliuer Senant.

Fol. ij ¶ Polydori Vergilij Vrbinatis ad Lodouicum | Odaxium Patauinum Præfatio. |
Fol. lxi a ¶ Finit Polydori Vergilij Vrbinatis de Inuētoribus rerū | opus Impressum Parisius (*sic*) Pro Oliuero_senant Cōmorāte | in vico diui Iacobi ad intersigniū diue Barbare virginis. |

Fol. lxi b ¶ Polydori Vergilij Vrbinatis de inuentoribus rerum. | Tabula Primi Libri | which ends fol. lxiij b. Lavs Deo.

It is in small quarto size, and it contains 61 leaves numbered, and 2 leaves of the table not numbered; the last leaf, forming sig. l 4, and probably blank, is wanting. It is printed in Roman character, except the first line of the title and the motto and name round the device, which are in Gothic character. There is no date. This is one of the rarest, if it be not the very rarest, of all the editions. It is not mentioned by any bibliographer, and I know of no other copy except this one in the Bodleian. There is none in the British Museum.

From the list of editions in the British Museum formerly given, I find that two have been omitted. One is the issue of the English version, printed in April, 1546, by Grafton, quoted by Dibdin, and—as I had seen no copy—merely alluded to on a former occasion; the other is the reprint of Langley's

¹ I would again repeat my acknowledgment of the kindness of F. Madan, Esq., of the Bodleian Library, who enabled me to consult this and several other works in that collection.

² *Trans. Archæol. Soc. Glasg.*, 1883, II. p. 233.

translation, London, 1663. These, together with the editions already described in Part II. of these notes, are all that exist in English, so far as I know. They amount to eight: three in 1546, and one each in 1551, (1570), 1659, 1663, 1868.¹ The only other point of interest is that the little book entitled *A Pleasant and Compendious History*, is nothing but Langley's Polydore Vergil, alphabetically arranged, curtailed, modernised, and with a supplement about English inventions added.

In the enumeration of the different editions of Pancirolo's history there was one omitted. It appeared at Amberg in 1612 in a small 8vo form, and it is entitled the third edition. The portion which I have got contains the first volume relating to the memorable things devised by the ancients. It is complete in itself, and I do not know whether the second book was published at the same time or not. I have seen two copies of this volume without the second. Long after came the quarto editions, three of which have been already before the Society. The present edition is not referred to by any one except by Graesse, so far as I have observed. In its original vellum cover it forms a much more attractive volume than the later foxy quartos. The second edition of the English translation appeared at London in 1727. It is merely a re-issue of that of 1715, with a new title page. (See *Notes*, Part II. Index, No. 96).

In the common-place book, or classified subject index to classical literature and antiquities by Johannes Ravisius Textor,² entitled *Officina*, there is a good deal relating to inventions, but it is in the form of mere notes or

¹ As I intend giving an account of the English editions in fuller detail, it is unnecessary to do more than mention them on the present occasion.

² Jean Tixier, Seigneur de Ravisi, was born about 1480. He taught the Humanities, rose to the position of Rector of the University of Paris in 1520, and died in 1524. He was author of several works, most of which went through a great number of editions. The *Officina* was first printed early in the 16th century, but the copies I have seen are late: Basil, 1617; Basil, 1626—practically a reprint of the preceding; and an Epitome, Geneva, 1626. Beckmann (*Beyträge*, Leipzig, 1805, V. p. 153) knew only the second of these, but mentions the Geneva edition on Morhof's authority, with the remark that if Morhof be right the work must have appeared at two places in the same year, which he apparently thought improbable. The Geneva epitome, however, is considerably altered in arrangement from the complete work. Morhof (*Polyhistor*, Lubeck, 1714, I. p. 244) calls it specifically an epitome, but that distinction has escaped Beckmann.

jottings, with only occasional references to authorities, and in no sense can it be viewed as a historical treatment of the subject. The work came accidentally under my notice, but I found that Beckmann had already reckoned it among the histories, although under protest. Book IV. throughout deals more or less with arts and discoveries, but chapter cii. is specifically entitled "De diversarum rerum inventoribus." This section will be found in vol. II. p. 97, of the Geneva edition. It is a mere catalogue, however, even more curt in its notices than that of Pastrengo.

Another of the books mentioned by Beckmann (*Trans. Archæol. Soc., Glasg.*, 1883, vol. II. p. 231) has recently come into my hands. It is the one entitled *Verum Inventum, Hoc est, Munera Germaniæ*, by Count Michael Maier, printed at Frankfurt in 1619. It is a sort of defence of the German people against one of Owen's epigrams, and among the inventions claimed for them are gunpowder, printing, the reformation of religion, the reform of medicine by Paracelsus, and the secrets of the Rosicrucians. It is not a systematic history and not a minute research, but it shows that the author, with all his fantastic beliefs, was a man of learning and acquirements. The Count was a voluminous writer, and his works, even a century and a half ago, were described by Dufresnoy as rare and much sought after by the curious. They are so still.

A history, purely English in its origin and treatment, appeared anonymously in 1661. Although the life of the author has been recorded by Wood,¹ and the work has been described in detail by William Oldys,² as well as mentioned by other writers, both the author and his work are practically unknown. The author was Thomas Powell, a native of Brecknock, who lived between the years 1608 and 1660. He wrote a few other works, some original, others translated from the Latin, the French, and the Italian; but that which is of special interest to us at present is entitled *Humane Industry: or, a History of most Manual Arts*, London, 1661. It was forgotten until Bolton Corney,³ having got the book, observed that his name had dropped out of the biographical dictionaries, and then hunted up the author in Wood's *Athenæ*.

¹ *Athenæ Oxonienses*, ed. Bliss, London, 1817, vol. III. col. 507.

² *British Librarian*, London, 1738, pp. 42-59.

³ *Notes and Queries*, London, 1849, vol. I. p. 102.

This was, of course, before the days of Allibone, who has given Powell a place,¹ and has quoted Wood and Oldys, the only authorities on the subject. Bolton Corney's copy of the *Humane Industry* belonged previously to the well-known antiquarian, John Brand. Corney concludes his notice by speaking of the work "as one which deserves a place in every choice collection of English books." Long before him, however, Oldys had perceived its value, and had displayed a particular interest in it, as I have ascertained definitely by referring to his copy, now in the British Museum.² That copy is a historical one, and belonged to several notable men. On the inside of the first board are the following notes. At the very top: "F. C. Waldron." Below that, "Nov. 12, 1760. This Book was presented to me "by Francis Grose, Esq., Richmond Herald. And. Ducarel. The MSS. Notes "are by Will. Oldys, Esq., Norroy, who had given it to Mr. Grose. This "Book to go among my Manuscripts on account of the MS. notes. And. "Coltee Ducarel, Oct. 15, 1761."³ On the title page: "William Waldron, 1812," and also, "W. O., 1715;" *i.e.*, William Oldys. After the words *Humane wit* stands in Oldys' writing: "By Dr. Tho. Powell, Canon of St. David's, who dyd 1660." On the last board is pasted the book-plate of Ducarel, with his name: "Andrew Coltee Ducarel, LL.D., Doctors' Commons."

This copy is especially interesting by the labour Oldys has expended on it. He has inserted in his very neat and distinct handwriting many new entries in the Index, and has appended the pagination to the whole of it. There are numerous marginal notes, additions, and criticisms throughout, and Oldys was in the fair way to have brought out a revised and enlarged edition. That, however, he never did, but twenty-three years later published a long abstract of the original.⁴ The introduction to his abstract may be quoted:

¹ *Dictionary*, vol. II. p. 1656.

² 7944 aaa.

³ Andrew Coltee Ducarel was Librarian at Lambeth Palace from 1757 to 1785, and was one of the most distinguished antiquarians of his time. See Cave-Browne, *Lambeth Palace and its Associations*, Edinburgh, 1883, p. 105.

⁴ *British Librarian*, Lond., 1738, pp. 42-59. The British Museum copy of this book also is an interesting one. It contains bound along with it several MSS., including a short notice of Oldys, one signed by Ducarel, a pedigree of the Oldys family, &c., but these, though interesting in themselves, are in no way connected with our present sketch.

“The Author of this learned Book has, with great Labour, join’d many dispersed Rarities of Art under several Heads; with much Modesty, brought a great deal of Reading into a little Compass; and, withall, omitted to prefix his Name to it. Yet, in justice to his Memory, we have been obliged with it by another Hand. [In a foot-note he quotes Anthony a Wood]. There is a short Preface or Advertisement to the Reader, seemingly by the Bookseller, in Commendation of the Work; wherein he says, *You will imagine yourself, even among the Mechanic Arts, to be conversant in the Liberal.* Tho’ from the Defect of the alphabetical Catalogue, intended at the beginning, of the principal Authors mention’d in this Work; with some Errors in the Table of Contents, and the Omissions in the Index of any Reference to the pages; we might, alone, without any other Knowledge of the Author, or the time when he died, have presumed he did not supervise the Press, yet are those Imperfections of little moment, because the Work is concise.”

In this he refers to deficiencies, which, as I have already mentioned, he tried to supply in his own copy.

Powell’s little work is divided into twelve chapters, each of which he glorifies with a Greek title. They are: of Dials; of Spheres; of Machines for Motion; of Writing; of Printing; of Painting; of Spinning; of Music; of Glass; of Sailing; of Taming of Wild Beasts; of certain pretty knacks and extravagancies of Art. The brevity of the treatment shows the author’s mastery of the material, and all that has been said of Powell and his book will be confirmed by every unbiassed reader. Of course, one would never place Powell’s book in comparison with Polydore Vergil’s. It is not nearly so detailed or so comprehensive, and the author seems to have aimed at chronicling discoveries which Vergil had omitted. Powell’s book besides, contains no controversial matter; it is written without extravagance, and has an agreeable flavour of quaintness and humour.

From the abridgement and from Bohn’s edition of Beckmann’s history, already spoken of, no one could form any idea of the genuine English translation. The second edition printed in four octavo volumes, in 1814, I have recently seen and it is undoubtedly the best reproduction of the original. Not to speak of its very much handsomer appearance, it contains many notes—full of interesting matter—that are omitted by Bohn, and each volume is furnished with very valuable indexes both of authors and of subjects. This edition is superior to the first, as it contains a fourth volume, but I have found that even in this edition the whole of the original is not present. The article, for instance, on the bibliography of the histories, which has been so

often referred to is not in it, but there can be no doubt that this is the best English edition of the book.

With Beckmann and the other historians, I thought the modern list had been exhausted, but there are still one or two works which had escaped me. One by J. Fred. Lake Williams was published at London in 1820, the other by Wm. Pulleyn in 1828. Both of these books leave a curious impression on the reader, chiefly of surprise, not merely at the increase and development of practical invention, but at the complete change of thought and expression, in less than sixty years in this country.

Williams' book bears directly on the subject of these notes—being a history of inventions for the well-being of man. In the introduction he speaks very correctly of the importance of his theme, and the little attention that had been paid to it, and then he enumerates the authors who have dealt with it, among whom are Polydore Vergil, Pancirollus, D'Origny, Beckmann, names now familiar to us. He is severe on Beckmann, for the desultory and non-systematic character of his history. Having already pointed out Beckmann's merits, which not only far outweigh his want of system, but leave his work even now quite unsurpassed, it is unnecessary to vindicate him from Mr. Williams' criticism. The best answer is given in Williams' own book, for it is to Beckmann that he is practically indebted for a very large proportion of his history.¹ Williams' book is antiquated in matter and in manner. Of

¹ Williams' history might have been allowed to rest in oblivion, but his treatment of Beckmann deserves more than a passing notice. It is not enough to say that he has copied a large part of his book from Beckmann's. In the midst of his unlimited drafts on Beckmann's learning and research, he occasionally quotes Beckmann's name in the text and notes! speaks of him as "a very respectable authority"! insinuates in one place that Beckmann raises a difficulty in order that he may parade his erudition! and then says that no one can have a greater respect for Beckmann's learning than he has! This—considering the use that Williams has made of it—is the very finest original remark that Williams ever made. Comparison of the articles on Apothecaries by the two writers will illustrate Williams' method. Beckmann begins with an apology for his want of a technical knowledge of pharmacy and wishes that the article had been written by a physician. Williams also begins with an apology; next he gives a short extract from Diodorus Siculus and one from Sir Thomas Browne, and then he proceeds to the main theme, "at the same time, lamenting that it is not treated of by a medical professor"!! What follows is a condensed copy of Beckmann's article, in the words of the English translation of 1814—but with one or two misspelt foreign names.

the great discoveries in chemistry which had been making for the previous forty years he takes no notice—the very name of the science is not even mentioned!

Pulleyn's book, *The Etymological Compendium, or Portfolio of Origins and Inventions*, is a curious gossiping collection, full of odds and ends of information. It has no pretensions to scientific or complete treatment, and is nothing more than a printed scrap or common-place book.

In the first part of these Notes I merely mentioned a book by Francis Sellon White. An opportunity has occurred to me of seeing it. Its title runs thus: *A History of Inventions and Discoveries: Alphabetically arranged. By Francis Sellon White, Esq. F.A.S. Many years on the Military Staff in India. Printed for C. and J. Rivington, London, by Creasy and Baker, North Street, Brighton. 1827.* It is fairly well done, readable, without any pretension to profound research or to the elucidation of any theory or principle, and contains no reference to any books, although it gives a list of authors and discoverers and inventors mentioned in course of the work. The information is reasonably accurate—as accurate as was going at the time—but in the article on “Books,” the first printed book is said to be the Vulgate of 1462, and the second Cicero *De Officiis*, 1466; but in that on “Printing” the first book printed with metal types is the Latin Bible, 1450, then in 1457, came Fust and Schoeffer's Psalter, and Duranti *Rationale Divinorum Officiorum* in

About half-way through the article, Williams deliberately says that for what follows about continental apothecaries he is indebted to Beckmann's work, just as if he had not been quite as much indebted to the same work for the previous portion! and what is even more startling, though he has copied this same English translation almost word for word, yet he hopes that his immature acquaintance with the original language may not have prevented his rendering the sense; and, accordingly, he places himself upon the liberality of the public—a body, by the way, to which he often refers, and his self-imposed duty to which seems to have made him oblivious of his duty to Beckmann.

If it were not appalling, such—conveyance (as the wise would call it), such attempts not merely to throw dust in the eyes of “the public,” but to make it high-gravel blind, such astonishing confidence that the parallelism between his book and Beckmann's could not be detected, would simply create inextinguishable laughter. Let us hope that the reviewers of 1820 did not hesitate to give a true opinion of Williams' history. One would like to know whether or not Sign. Narducci, to be presently mentioned, would consider this a case of plagiarism.

1459. Such slips, doubtless, detract from the book, and there are probably others; but on the whole the book is not a bad one.

Under the title: *Chronologische Uebersicht der Erfindungen und Entdeckungen*, Adolph Poppe drew up a list of inventions and discoveries in the physical sciences, of which I have the second edition, printed at Frankfurt in 1857. It forms a small pamphlet and is a disappointing production, in which the subject is dealt with in a very meagre way. Considering the material at his disposal, it is far inferior to the lists of Pastrengo, Contarino, and Textor.

It should have been pointed out before that Karmarsch in his *Geschichte der Technologie* devotes the last section to a consideration of the literature and history of technological science in the modern period, and enumerates some of the chief works of a general character, histories, encyclopædias, dictionaries, magazines, journals, and proceedings of societies, which have appeared during the last hundred years.

II. BOOKS OF SECRETS. A.—Coming now to Secrets and Receipts some additional copies of books already referred to may first be mentioned.

Foremost among these is the *Speculum Doctrinale* of Vincent de Beauvais, which deals more particularly with practical arts. As, however, I have already spoken this evening about Vincent's whole work, there is nothing more to add at present.

Of the encyclopædia of Bartholomew Glanville there have been quite recently four copies in catalogues, besides that of 1485 formerly described by me. One is of an early edition, without date, but printed about 1472, another of 1491, a third of 1492, by Koburger, and a fourth—the most valuable of all—the English version of Trevisa, printed by Wynkyn de Worde. It is somewhat remarkable that so many copies of this old work should have been met with for sale within the last couple of years, while other books of much more recent date have kept quite persistently out of sight. But all of these, I regret to say, have proved unattainable. I have here, however, a copy of the *De Proprietatibus Rerum* written on paper, in a small and very contracted hand, belonging, so far as I can judge, to the 15th century. It shows how much the book was thought of when manuscript copies were

multiplied as they seem to have been. Glanville's book is of a very miscellaneous description, and contains many practical receipts.¹

¹ Since the above was written I have met with a paper by Sign. E. Narducci, read to the Accademia dei Lincei at Rome, in January, entitled: *Intorno ad una Enciclopedia finora sconosciuta di Egidio Colonna, romano, ed al plagio fattone dall' inglese Bartolomeo Glanville (Atti della Reale Accademia dei Lincei. Serie Quarta, Roma, 1885. Vol. I. p. 67)*. The author describes a vellum MS. in 12mo, written in a very small and contracted hand of the end of the 13th century, and containing 164 leaves, in the first 121 of which there is a treatise in seven parts on the heavens, animals, minerals, &c. It concludes: *Explicit liber de proprietatibus rerum*. The name of the author has been obliterated, but Narducci endeavours to prove that the work was composed between 1281 and 1291—that the author was Egidio Colonna, and that besides this MS. there are probably a few others containing the same compilation.

The second part of the paper contains an attempt to substantiate for the first time a charge of plagiarism of this encyclopædia against Bartholomew Glanville. The author asserts that in many places Glanville has copied *ad litteram* from Colonna and the proofs are as follows:

First—Glanville has distinctly stated that his work is a mere compilation, and that he has put in very little of his own, and he gives a list of 105 authors from whom he has borrowed, besides quoting others in the text. Neither in this list, nor in the text does Colonna's name occur, and consequently, the author argues, it has been deliberately suppressed.

Secondly—Comparison of the two works displays resemblances which can only be accounted for by supposing that Glanville actually copied from Colonna. As a proof of this the author quotes a paragraph *de Magnete* from each, and prints them in parallel columns for the sake of comparison.

As to the first argument it seems to dispose of itself; for if Glanville quotes in good faith every author and does not quote Colonna, the conclusion seems to be not that he stole from him and did not tell, but that he did not know him at all, and consequently could not steal from him. The author appears to me to assume the plagiarism and then to interpret Glanville's silence in the most unfavourable way.

Secondly—Parallel passages are after all the best proof of copying if any such existed. I have gone with some care over the passage quoted, and I assume that Sign. Narducci has chosen one that will set the plagiarism in as strong a light as possible.

The paragraph from Colonna contains 51 lines, that from Glanville 42 lines. Of these, 23 lines are identical, simply because they are both using confessedly the same authorities, namely Isidorus, St. Augustine, and Dioscorides. Of the remaining 19 lines in Glanville not one occurs in Colonna, and the remaining 28 lines of Colonna which contain a mystical application of the magnetic attraction are wanting in Glanville. The plagiarism therefore consists in each of them copying the same authors, and Sign. Narducci should prove that Glanville took the passages from Colonna and not from the originals. But Glanville's quotation from Isidorus is longer than Colonna's.

I am not concerned much to vindicate Glanville, even if the preceding be not the strongest evidence against him, but one or two additional points may be mentioned in his favour.

In the previous notes I just alluded to the tracts *De Secretis*, by Albertus Magnus, but I can omit them no longer without leaving the present research more defective than it need be. They are, besides, so closely connected with the corresponding work of Michael Scotus, to which I hope to return before long, that the bibliography of them must be taken either with that of books of secrets in general or with that of Michael's. I prefer the former arrangement, and will enumerate the editions which I have seen, leaving the historians of early physiology to deal with the contents. That part of the subject would be, besides, somewhat out of place in the present society.

So far as can be judged by Sign. Narducci's description Colonna's encyclopædia must be much smaller than Glanville's. The MS. has 121 leaves, 12mo, and contains seven books. Glanville's work contains nineteen books and in all the forms of it I have seen, both printed and manuscript it is a bulky volume, *ingens volumen*, as Bale calls it (see the list in Part II. of these notes). Thus my MS. above mentioned contains only fifteen books. It is in small folio, double columns, it is written in a small and very contracted hand, and these fifteen books fill 98 leaves, each of which probably contains three or four times as much as the other. At the same rate the complete work would occupy about 125 leaves. It is obvious, therefore, that even supposing Glanville had incorporated the whole of Colonna's encyclopædia as it stood (and it has been proved by the above analysis that he did not), he must have had other sources from which he gathered the rest of his material.

Glanville's book as I have shown formerly, as well as on the present occasion was printed repeatedly. Hain (*Repertorium Bibliographicum*, I. Nos. 2498—2523) enumerates 26 editions in Latin and other languages printed before 1501; Atkinson (*Medical Bibliography*, p. 176), enumerates 42 editions in all. Sign. Narducci makes no attempt to explain how Glanville's encyclopædia had so wide a circulation and how Colonna's, to which, he thinks, Glanville was so much indebted, had little circulation as a manuscript, never got into print at all, and has been utterly lost sight of for 600 years. Glanville's book undoubtedly served its day and generation, and if any of Colonna's material was incorporated in it—which has not yet been proved—then it is the only portion of that writer's compilations which was ever turned to any account, had even a chance of being known, and proved ever to be of any general use. If Glanville copied, then it was he who put so much of Colonna's work in circulation which Colonna obviously could not do for himself.

Is there any proof that Glanville did plagiarise in the nineteenth century meaning of the word? Both were compilers—and compiling in their time meant copying and arranging. Did Glanville appropriate Colonna's original ideas in his actual words, without acknowledgment, and attempt to pass them off as his own? There is no evidence of this. Did Glanville do more than, finding certain passages, transfer them to his pages? As far as Sign. Narducci's quotation shows Glanville copied from three authors who had been already copied by Colonna. But he did more, he made a longer quotation from one of them than Colonna made, and he quoted another writer whom Colonna did not quote.

Two different compilations are ascribed to Albertus Magnus. One is styled *Liber aggregationis seu Liber Secretorum de virtutibus Herbarum, Lapidum, et Animalium quorundam*. The other is *De Secretis Mulierum*, which has been ascribed to Henricus de Saxonia, a pupil of Albertus. These two tracts are sometimes printed separate, sometimes together. They passed through a very great number of editions, both before and after 1501. Of these there are certainly far more than fifty, and it would not surprise me in the least to be told that, with the reprints in chap-book form, there is double that number. Forty-two editions prior to 1501 of the two tracts are enumerated by Hain, and between thirty and forty editions are entered in the British Museum Catalogue. I have not gone into the details of this bibliography, but as I happen to have a few of the editions, and to have consulted some of those in the British Museum, I may notice them as briefly as will serve for their identification.

The first I have is that numbered 555 by Hain. It is a small quarto of 33 leaves, without date, place, and name of printer. The text is printed in a medium Gothic character; the commentary in one somewhat smaller. As Hain's account corresponds exactly with the copy I possess, description is unnecessary.

The second copy is similarly described with perfect accuracy by Hain under number 563. In it only the first two or three words of the text of each chapter are given, and the rest is made up of commentary. The com-

But there is another point worth considering: how much were they both indebted to a much greater compiler, Vincent de Beauvais?

After all it is of little importance if Glanville be proved to be as much an appropriator of other men's compilations as Mr. J. F. Williams already mentioned. If it were proved, I for one would accept the inevitable, but I do not think that Sign. Narducci has established his accusation.

Those who are concerned to know more about Glanville may consult, among others, the accounts of him given by Bale (*Illustrium Maioris Britanniae Scriptorum . . . Summarium*, Gippeswici, 1548, f. 153 *b*); Pits (*De Rebus Anglicis*, Parisiis, 1619, p. 494); Cave (*Scriptorum Ecclesiasticorum Historia Literaria*, Oxonii, 1743, Vol. II., Appendix, p. 66); Oudin (*Commentarius de Scriptoribus Ecclesie*, Lipsiæ, 1722, col. 969); Quétif and Echarde (*Scriptores Ordinis Prædicatorum*, Lutet. Paris. 1719, Tom. I. p. 486); Tanner (*Bibliotheca Britannico-Hibernica*, Londini, 1748, p. 326); and the articles in the encyclopædias and the biographical dictionaries.

mentary, however, is different from what one usually finds, and according to Hain is the same as that which was printed at Vienna by Johann Winterberg.¹

This edition is further distinguished by a curious misprint in the colophon, which runs :

Explicit liber Alberti magni de secretis mulierum. | 1428. vicesimaquarta die mensis
Junii. |

The year in this case is obviously wrong ; it may be either 1478 or 1482. I take it to be 1482. The volume is a small quarto of 56 leaves, printed in Gothic character, and has no place or printer specified.

The next copy is one of such surpassing rarity that Hain never heard of it, and only two copies altogether are known. It is the edition printed by Machlinia in London about 1483, and is one of the finest specimens of the press of that printer. As an account of this volume would take too much space here, I intend considering it in a separate paper.²

The fourth copy is also undescribed by Hain, but the probability is that, if he knew it, he considered it later than 1500. As I have found no mention of it anywhere, the following description may prove useful :

F. 1 a, with signature, a.1. (s) Cribit philosophus | philosophorum prin | ceps.
quarto. ethico | rum. Hō est opti- | mum eoru3 que sūt | in mundo. Et mun- |
dus sumitur etc. *F. 44 b, l. 16:* Finit tractatulus venerabilis Alberti magni. |
Sequuntur capitula huius libri. | *Ends:* Ca. duodecimū & vltimū de gñatiōe
spermatis in viro. |

It is a quarto, with signatures a-e in eights and f4, 44 leaves in all. It is printed in Gothic character, with 33 lines to the page, and has neither date, place, nor printer's name. This edition contains the text in full, with the usual commentary.

After getting into the sixteenth century, we pass from quartos to copies of a smaller size. I have one such here. The title is as follows :

¶ Secreta mulierū et vi- | rorū ab alberto magno nu | perrime composita. | 1526. |

¹ In this edition (Hain 562) Henricus de Saxonia is distinctly specified: *F. 2 b.* Tractatus Henrici de saxonia Alberti magni discipuli de secretis mulierū quē ab Alberto excerptis feliciter incipit. I have not seen this book.

² The paper containing an account of this volume and of the almost equally rare *Liber aggregationis* also printed by Machlinia, was subsequently read to the Society of Antiquaries, London, Feb. 19, 1885.

On the reverse of the title: Scribit philosophus philosophorum princeps | Hō est optimuz eoꝝ q sunt in mūdo & mundus | etc. *The text begins on fol. 2 a, with signature Aij.*

Then f. 36 b, l. 22: ¶ Finit Tractatulus venerabilis Alberti | magni de secretis mulierū & virorum. | *followed by the fleur de lis.*

It is a 16mo, with signatures A—D in eights, and E 4, 36 leaves in all. It is printed in a small Gothic character, 40 lines to the page; has no catch-words, but has titles to the different sections of the text printed on the outer margin. There is no place, or name of printer. This reprint contains the usual text and commentary. The title-page is enclosed in an ornamental border, and the device is a large fleur-de-lis.

Among the copies in the British Museum I examined one printed at Antwerp in 1538. The title goes wide of the usual form, and as this book is not a common one, the following account may be inserted:

F. 1 a. Title. Alberti | Cognomento Magni | Libellus qui inscribitur de Formatione ho- | minis in vtero Materno, vel vt notiori Titu | lo, Secreta Mulierum, Nunc recens ex Ar- | chetypo exscriptus, exactiori diligentia | recognitus & à multis prodigiosis | mendis repurgatus. Cui tandem | accesserunt scolia non minus | philosophiæ, quàm Me- | dicinæ candidatis | vtilia.

Respuit ornatum, per se contenta doceri

Ingeniosa physis, respuit & phaleras.

Id quod permuncta olfaciēs hic nare libellus,

Rudius & crasso disserit ore Physin.

F. 1 b. Prohemivm. | Scribit Philosophus Philosophorum prin- | &c.

F. 2 b. Dilecto sibi in Christo socio & | amico. N. clerico de tali loco | veræ sapientiæ &c.

F. 55 b. Finis lib. Alberti cognomento Magni de homine, | quod si mauis, vt alij, de embryonis figmento, seu | secreta mulierum cum commentariis auctis, & re- | cognitis (*sic*) singulis, exactéque ad limam reuocatis. | Antuerpiæ, ex officina Viduæ Martini Cæ | saris. Anno à Christi natiuitate, M.D. | XXXVIII. mense Octobri. |

Small 8vo, signatures A—G, in all 56 leaves, of which f. 56 is blank. The text is in roman character, the commentary in italics.

The next copies I have to mention display one of those mysteries of printing and publishing, the meaning of which I do not profess to explain.

F. 1 a. Alberti | Cognomento | Magni de secretis Mulie- | rum, Libellus, scholijs auctis, & à | mendis repurgatus. | Eivsdem De Vir | tutibus Herbarum, Lapidum,

& Ani- | malium quorundam libellus. | Item De Mirabilibus | mundi, ac de quibusdam effectibus | causatis à quibusdam ani- | malibus, &c. | Lvgdvni | 1566.

F. 2 a. (With signature A 2.) Prooemivm. | Scribit philosophus philosophorū | princeps: Homo est optimū corum | quæ sunt in mundo: &c. *Ends: Dd 8a:* Alberti Magni De | Proprietatibus Herbarum, | Lapidum, & Animalium | quorundam. | Finis. |

This is a 32mo, signatures A—Dd 8, in eights, ff. 216. Catchwords. The text is printed in italics 16 lines to the page; the commentary in roman character, 23 lines to the page. The printer's name is not given.

The second copy is as follows:

Title. Alberti Co- | gnomento Ma- | gni de secretis Mulierum, Li- | bellus, scholijs auctus, & | à mendis repur- | gatus. | Eiusdem De Virtv- | tibus Herbarū, Lapidum, | & Animalium quo- | rundā libellus. | Item De Mirabilibus | mundi, ac de quibusdam effectibus | caussatis à quibusdam ani- | malibus, &c. | Lvgdvni | 1566.

F. 2 a. (With signature A 2.) Prooemivm. | Scribit philosophus philosophorū | princeps: Homo est optimū eo- | rum quæ sunt in mudo (*sic*): &c.

F. Dd 8a. Alberti Magni De | Proprietatibus Herbarum, | Lapidum, & Animalium | quorundam. | Finis. |

This is a 32mo, signatures A—Dd 8, in eights, ff. 216. Catchwords. The text is printed in italics, 17 lines to the page: the commentary in roman character, 22 lines to the page. The printer's name is not given.

Though printed at the same place, in the same year, and in the same size and style, these two books are quite different. I am inclined to think, however, from the superior finish of the latter copy, that it is a later reprint, copied, it may be, even to the date.

These editions, it will be observed, contain both the tracts.

Just at the close of the century a new start was made in the printing of Albertus' tract. It was accompanied by that of Michael Scot, and a great number of editions appeared. The earliest I know of is dated 1580, but that which I have seen is of 1598, and there is a copy in the Douce Collection in the Bodleian.

As the title of this occurs in later editions, it may be quoted as typical:

Alberti | Magni, | De Secretis Mvliervm | libellus, scholiis auctus, & à | mendis repurgatus. | Eiusdem de virtutibus herbarum, lapidum, & | animalium quorundam

libellus. | Item de mirabilibus mundi, ac de quibus- | dam effectibus causatis à
quibusdam animalibus, &c. | Adiecimus & ob materiæ similitudinem Mi- |
chaëlis Scoti philosophi, De secretis naturæ | opusculum. | Cum Indice
locupletissimo. | Lvgdvni, | Apvd Anthonivm De Harsy. | MDXCVIII.

It is a square 16mo, pp. 381; Index, pp. 9, not numbered; and a blank leaf.

A reprint of this book, in the same form, was brought out in 1607 at Strassburg, by the well-known printer and editor Lazarus Zetzner. There is a copy in Sir William Hamilton's Collection in the University Library.

In 1615, at Frankfurt, the tracts of Albertus and Michael were published simultaneously, but in separate volumes. They were printed by Johann Bringer, and were got up in exactly the same style. The title of that of Albertus is as follows, taken from the copy in the British Museum :

Tractatus | Henrici | de Saxonia, Al | berti Magni Disci- | pvli, De Secretis Mvlie- |
rum, in Germania nunquam | editus. | Accessit Insvper Eivs- | dem de virtutibus
herbarum, lapidum, | quorundam animalium, aliorum- | que libellus. | Franco-
fvrti | Excudebat Iohannes Brin- | gervs, opera & impensa Pe- | tri Mvscvli. |
M.DC.XV.

The text is practically the same as in the common editions, but it is differently divided. The commentary also is different, but whether it is identical with that in Winterberger's and the 1428 (*sic*) editions, or is different from it, I am unable to say. The second part of the volume contains the *Liber Aggregationis*.

A republication of these tracts was subsequently carried on at Amsterdam. The earliest edition I have met with is in the British Museum:

Albertvs | Magnvs | de | Secretis | Mvlierm. | Item | De Virtutibus Herba- |
rum Lapidum et | Animalium. | Amstelodami, | Apud Iodocum Iansso- |
nium. A°. 1643.

It is a small volume in 24mo, with an engraved title, 366 pages of text, and 5 leaves of Index. This work appeared several times with some variations in the number of pages and in other details. It is unnecessary to do more here than give the dates: 1648, 1655, 1662, 1665, 1669 (2 issues), 1702. There were also editions of 1652 and 1760 in Latin, but I have not seen them.

Notwithstanding these and a great many more editions in Latin, the work was translated into the modern languages—French, German, English, and even Polish.

The French translation was first printed about the middle of the sixteenth century, and from that date to the beginning of last century only a very few editions were published. Last century, however, a translation with additions and alterations was issued in 1706, and a considerable number of editions followed; ten have been enumerated. To one, that of Cologne 1722, reference has been already made, and I have seen a reprint of this which professes to have been printed at Lyons, and has the date 1729.

The present century is that of chap reprints. Nisard has mentioned some of these, and I have one printed at Lyons, with the false date 6518, that is: 1856 or 1865. It is entitled *Les admirables Secrets d'Albert le Grand*, and it forms a small 12mo, with a frontispiece and four woodcuts of the vilest chap-book character. They are hideous caricatures of the engravings in the 1722 edition.

A much more important work is the treatise *Les Secres des Dames*, edited from ancient manuscripts by the Drs. Colson, and published at Paris by Rouveyre in 1880. This is a critical edition, giving in the introduction an account of the MSS., followed by the text, with notes, a glossary, and supplemental notes, including a bibliography of the French translations. In the meantime this, so far as I know, is the best work on the subject; while, apart from its literary merit, it has the additional attraction of being beautifully printed in black letter; and there are, besides, only 342 copies printed. It has, therefore, all the qualifications for becoming a bibliophile's book. It ought to be remarked, however, that only the matter of this book is taken from Albertus Magnus, and that it is not an actual translation of the *De Secretis Mulierum*. The relationship of the two works is discussed by the editors in their introduction.

Of the German versions there seem to be varieties also. Of an older form, I have a copy entitled *Eln Newer Albertus Magnus*, printed at Frankfurt by Weygandt Han, without date, but early in the sixteenth century. In this the *De Secretis Mulierum* is reduced to a minimum, and practical directions are given which are not contained in the earlier edition.¹ This

¹ This edition is well supplied with woodcuts, which were reproduced in the corresponding English treatise, entitled "*The Birth of Mankind*," by T. Raynalde. This latter is said to be a translation of the work of Eucharius Röslein: *Der Swangern Frawen und*

is followed by an account of the secrets of plants, animals, and minerals; and then come receipts for curing various bodily afflictions, and a special tract upon the plague. Having only one edition, I am unable to trace the history of this compilation, but there are undoubtedly earlier editions, possibly with a closer resemblance to Albertus' work.

The more modern translation is based on the joint edition of Albertus and Scotus. The oldest copy I have seen is in the British Museum:

Von den Geheimniſſen derer Weiber: wie auch von den Tugenden derer Kräuter, Steine und Thiere: und den Wunderwercken der Welt. . . . Nürnberg, In Verlegung Johann Hoffmanns, seel. Wittb. und Engelbert Streck, . . 1701.

The engraved title-page, however (which is a very poor reproduction of that found in all the Amsterdam issues) bears date 1678. So it would seem as if there had been an early edition, and that residual copies of the title-page had been prefixed to that of later date.

In 1725 the same book appeared at Nürnberg, published by the same firm. Both of these books are in small 12mo, uniform with the Latin editions.

The English editions are to us perhaps the most interesting. The title is given by Lowndes:

—The Booke of Secretes— of the Vertues of Herbes, Stones, and certaine Beastes. Also a Booke of the same author of the maruaylous thinges of the world, and of certain effectes caused of certayne Beastes. London, by Wm. Copland.

16mo. Black letter. A to L 4, in eights, the last leaf blank. This description is obviously taken from an actual copy. It is not in the British Museum. The one which is there is of a later edition:

The Secrets | of Albertvs | Magnvs. | Of the Vertues of Hearbs, | Stones, and certaine | Beasts. | Whereuuto (*sic*) is newly added, a short dis- | course of the seuen

Hebammen Rosengarten, s. a., 4to, (for which see *Geschichte der Medicin*, by Haeser, Jena, 1881, vol. II. p. 205). It is possible that the practical directions in the *Newer Albertus Magnus* are borrowed from Röslin's treatise, but I have had no opportunity of comparing them. The first edition of Raynalde's book, or translation, if it be really such, appeared at London in 1540. As described by Lowndes, and as may be seen from a copy in the Hunterian Library, it contains the same pictures as are contained in the German version now under consideration. They were repeated afterwards in the 1565 edition, of which I have a copy, with all the illustrations complete. The British Museum has no copy dated 1540, and its 1565 copy is imperfect. An account of this work of Raynalde's was communicated to the Society by Professor Young, M.D.

Planets, gouerning | the Natiuities of Children. | Also a Booke of the same Author
| of the maruellous (*or* marnellous?) things of the | World, and of certaine effects |
caused by certaine | Beasts. | Printed by W. Iaggard. 1617.

It is a 16mo. Signatures A—H, in eights (ff. 64). Black letter, but the title, preface to the reader (A2), head-lines, headings of the sections, words and lines in the text, are roman. Iaggard's translation compared with the other Latin copies exhibits some differences.

Twenty years later the book again appeared. I take the title as given by William Cooper:¹

Albertus Magnus, his secrets of the Virtues of Herbs, Stones, Beasts, &c. Lond.
1637, 8.

This book is not in the British Museum, and I have seen no copy of it elsewhere.

The translation of the *De Secretis Mulierum* was only executed last century. The title is given by Lowndes, and there is a copy in the British Museum from which I have taken it:

De Secretis Mulierum: Or, The Mysteries of Human Generation Fully Revealed.
Written in Latin by Albertvs Magnvs. Faithfully rendered into English (*sic*),
with Explanatory Notes, and Approved by, the late, John Quincy. M. D.
London: Printed for E. Curll, at the Dial and Bible, over against
Catherine-street in the Strand. M.D.CC.XX.V. (Price 2s.)

It is a small 8vo, pp. viii ; account of the author, [4] ; text, 108.

This book seems to be not unknown to readers in the Museum, but it is not one from the perusal of which much, if any, profit can be got.

The preceding list will give a notion of the number and variety of the editions of this book which passes under the name of Albertus.

Allusion has been made repeatedly to a small German treatise on the arts, entitled *Kunstbüchlein*, of which the oldest version described belonged to 1531, and of which there were subsequent issues both in German and in Dutch.² I can now add other two to the list. The first is in German, and is entitled *Ettliche Künste, auff mancherley weisz Dinten vnd allerhand Farben zu bereyten*. It is a small octavo volume, printed by Christian Müller at

¹ *A Catalogue of Chymicall Books*, London, 1675, Part I.

² *Trans. Archæol. Soc. Glasg.*, 1883, vol. II. p. 263, Nos. 10, 11, 12, and p. 269, No. 110.

Strassburg in 1563, and it consists of the sections relating to ink, colours, and etching upon steel contained in the *Kunstbüchlein*, evidently reprinted for the use of a special class of artists. The second is the English translation of this tract, to which reference was made on a former occasion.¹ It is mentioned by Lowndes, as then stated, and I observed a copy in a catalogue some time ago which I failed in procuring, but I have since examined that in the British Museum (C 31 c 21). Its title is 'as follows:

Fol. 1 a. Title. A | Booke of Secrets: | Shewing diuers waies to make and prepare
all | sorts of Inke, and Colours: as Blacke, White, | Blew, Greene, Red, Yellow,
and other Colours. | Also to write with Gold and Siluer, or any kind of Mettall |
out of the Pen: with many other profitable secrets, | as to colour Quils and
Parchment of | any colour: and to graue with | strong Water in Steele | and
Iron. | Necessarie to be knowne of all Scriueners, Painters, | and others that
delight in such Arts. Translated out of | Dutch into English, by W. P. |

Hereunto is annexed a little Treatise, | intituled, Instructions for ordering of Wines: |
Shewing how to make Wine, That it may continue | good and faint not, Neither
become sower, nor loose colour. And | how you may remedie faint Wine, take
away the hoari- | nesse, with other instructions for the pre- | seruation of the
same. | Written first in Italian, and now newly translated | into English
by W. P. |

London, | Printed by Adam Islip for Edward | White, and are to be sold at his
shop | at the little North dore of Pouls, | at the signe of the Gun. | 1596.

Sm. 4to. No pagination. Title, A3 and A4, B4, C4, D4, and E4
[ff. 19]. Printed in black letter.

The first tract contains a translation of pp. 33-74 and 84-88 of the *Kunst-Büchlein*, Frankfurt, 1687, corresponding therefore practically with the *Ettliche Künste*. A few receipts have been omitted, and there is nothing about dyeing leather or cleansing fabrics. Half of the date has been cut off, but it is obviously 1596, and is so marked on the back and in the catalogue of the British Museum. The second tract is of course from an entirely different source, and has nothing in common with the German and Dutch collections. The translator's name is W. Phillip, and I have no doubt that "Dutch" here means "High Dutch," that is German.

Of Levinus Lemnius' treatise *De Occultis Naturæ, Libri IV.* two editions have come into my hands. One was printed at Frankfurt by Wechel in

¹ *Trans. Archaeol. Soc. Glasg.*, 1883, vol. II. p. 252, note.

1590, and is uniform with the later editions of 1604 and 1611, as well as with the 1592 edition of Mizauld's collection to be afterwards described. The other was printed at Leyden by Abraham Commelin, about 1651-55. It has an emblematic engraved title; in the centre is a winged draped female figure, pointing with her left hand to a pile of books, musical instruments, armour, &c., while with her right she holds to her mouth a curved horn, wherewith she is proclaiming the emptiness of human works, as indicated by the word *Vanitas* which issues from the bell of the horn. At her feet in one corner is a little boy seated on a skull, engaged in blowing soap bubbles. The book contains an elaborate dedication to certain Amstelodamians. This is an interesting volume. It is one of two works printed by Commelin in the Elzevier style, and Willems¹ says of it: "La plus jolie des nombreuses éditions de ce livre curieux, faite sur celle de Plantin, Anvers, 1564, in-8 Le volume ne porte point de date; mais l'épître dédicatoire d'Abr. Commelin aux magistrats d'Amsterdam témoigne qu'il a vu le jour en 1651." There is no doubt that this is really the neatest of the editions. According to Willems it has eleven preliminary leaves, of which the first is blank—that leaf is wanting in my copy.

One of the most noteworthy additions I have been able to make to my list is a copy of the *Thesaurus de Remediis Secretis* of Gesner, quite unknown and undescribed. Every bibliographer I have consulted says the book was first published at Zurich in 1554, and I repeated the statement, with a copy of that edition before me.² But that which I have since got is dated 1552, and besides having a different title page, in which Gesner's name does not appear, exhibits distinct typographical variations. This is the earliest edition I know of; it says: *nunc primum in lucem editus*, but whether it is the first edition of all I am not at present prepared to say. It is a nicely printed book, more attractive than the edition of 1554, which, although corresponding with it page for page, and even line for line, is not identical with it.

¹ *Les Elzevier*, Bruxelles, 1880. No. 1667. See also his introduction, pp. 422, 423.

² *Trans. Archæol. Soc. Glasg.*, 1883, vol. II, p. 265, No. 40. The edition of 1554 is there described as complete with pp. 580, and index pp. 38. It ought, however, to have a supplement: *Iacobi Bessoni De Absoluta Ratione Extrahendi Olea. . . . Tiguri, . . . 1559*; pp. 42 and 3 (?) blank leaves. The 1552 edition does not contain this supplement.

In addition to the copy of the Lyons edition of 1555 bearing the name Balthazar Arnollet, I have got an exactly similar copy of the same date, with the name of Antoine Vincent, who, as was formerly pointed out, published a French translation in 1559. There must have been some curious arrangements among the Lyons printers in the 16th century. I have already referred to two quite different issues of Albertus Magnus at Lyons in 1566, and now here are two identical copies with different publishers. Was it the habit to divide an edition among several publishers, and to let each have a title-page for himself—just as now-a-days manufacturers put on their goods the names of the different dealers, who are to retail them? The printer's name, however, at the end is Arnollet's, so that Vincent must have cancelled the other title-page, or else had one specially printed for himself, not caring whether the colophon agreed with it or not.

In attempting to ascertain when the first edition of the Secrets of Alexis, or Alessio of Piedmont, appeared, I have encountered a difficulty.

This standard collection is in four parts, which came out in different years. Brunet¹ makes a decided statement: "De' secreti (*sic*) del reverendo Donno Alessio Piemontese sei libri. In Venezia, per Sigismondo Bordogna, 1555, in-8." From the statement of the author, or nominal author, we seem warranted in drawing a different conclusion as to the language and date of the first edition. In his general preface, Alexis recounts what led to his committing his secrets to writing. He had laboured long and eagerly to acquire knowledge, especially of the secrets of nature and of medicine; he knew many languages, had travelled incessantly, like Paracelsus had consorted with all kinds of people—scholars and artizans, rich and poor—and had amassed learning till he had become vain of his acquirements, a miser of his skill, and jealous of any one

¹ *Manuel*, Paris, 1860, I. col. 159. This is considered the first edition.

Watt (*Bibl. Brit.*, I. 20m.) must have made an error when he says the first edition appeared at Basel in 1536, which place and date I repeated without knowing any better (*Trans. Archæol. Soc. Glasg.*, 1882, II. p. 190). The place is wrong, and the date is plainly impossible; for if Alexis was in his 83rd year before he began his compilations at all, and the first part appeared in 1536, then he must have been in his 104th year when he revised the second Italian edition in 1557! But the preface to this edition disposes of such an absurdity as that, and shows that this must have been a mere misprint in Watt's list, though a misleading one.

knowing what he knew. So it happened that in his 83d year he came to Milan, where he was asked by a surgeon to assist in relieving the suffering of a patient; but seeing that the surgeon would claim the credit of the cure, Alexis refused until it was too late, and the patient died. He thereupon reproached himself with having been, through his jealousy and vain-glory, nothing less than the poor man's murderer, and the feeling of remorse was so strong that he withdrew himself to a solitary house in the country, and resolved to make amends by revealing all he knew for the good of mankind. He accordingly wrote out the first part of his secrets.

This was in 1555 (P) or 1556; for in the epistle prefixed to the Italian edition dated 1557 he tells us that in the previous year, actuated by the motives just described, he had compiled his secrets. The compilation, *which was in Latin*, was hurriedly done, contained mistakes and corrections and additions; but just as it was, without revision, it had to go to Venice to be printed.¹ A few months later he was gladdened by hearing that it had already appeared in Italian, and had been very well received. In the meantime he had gone on preparing a second part, when, happening to be in a bookseller's shop in Milan, he saw a copy of the Italian translation of part I. He found it well executed, but faulty in various places, either from uncorrected mistakes in his own original work, or by the translator having misunderstood his meaning. The bookseller told him that as the copies had been all sold off, a new edition was going to be printed at Venice, and he added that he thought it was the author's duty to revise it before it appeared. Seeing the force of this, Alexis laid aside for a time the second part on which he was engaged, revised the Italian version of the first part, and added some new matter to it. The edition came out in 1557, and the following account of it is from the copy in the British Museum (42 f 19):

¹ The difficulty comes in here. If the author's story is to be taken quite literally, that the first edition was in Latin, and appeared the year before the second Italian version, that is, in 1556, then either Brunet's date 1555 is a misprint, or the author's story is inaccurate. The contradiction *may* be reconciled by supposing that though the second Italian edition bears date 1557, the preface was written really in 1556, and then the "previous year" would coincide with Brunet's date, and the edition he quotes would be the Italian translation referred to by Alexis as having been executed immediately after the original Latin work appeared. The fact is, however, I have no confidence in the accuracy of either Brunet or Alexis.

De' Secreti del Reverendo Donno Alessio Piemontese, Prima parte, diuisa in sei libri. Opera vtilissima, et uniuersalmente necessaria, & diletteuole à ciascheduno. Ora in questa seconda editione dall' autor medesimo tutta ricorretta, & migliorata. Et aggiuntovi nel fine d'ogni libro molti bellissimi secreti nuoui. Con privilegio dell' illustrissima Signoria di Venetia, & altri Principi, per anni XV.

In Venetia per Comin da Trino. M.D.LVII.

It is a small 4to, contains 24 preliminary pages, 191 numbered pages, and one page not numbered. The title is surrounded by a large border consisting of architectural ornaments, curtains, cupids, female winged satyrs, and two aged male figures at the bottom crouching and pointing to the title.

Besides the Venice edition, another appeared at Lucca, also in 1557, and, as I formerly mentioned, a reprint of this second edition was published at Lyons *per Theobaldo Pagano* in 1558.¹ By the entries in the British Museum Catalogue, the further progress of the work can be traced: Part II., Milan, 1558; Parts II. and III., 1559; Parts I.-III., Venice, 1568, already mentioned by me, but not in the Museum. There is also an edition Lucca, 1559, not in the Museum, which I know of only by having seen it in a sale catalogue² of alchemical books, along with a number of others of the same class.

Apparently, therefore, the first edition, which was in Latin, appeared in 1555 or 1556, and one can judge of the rapidity with which people got along even then from the fact that it was immediately translated into Italian, that it was translated from Italian into French by 1557, that a copy of the French version reached England, was turned into English, and the translation published in a small quarto volume by November, 1558. I have a copy of the first English edition. It tells its own tale of suffering during its three hundred and thirty years of existence; it was imprisoned in a Cathedral library; it is blotched and tender with damp and mildew; it has been riddled by bookworms; it has been the victim of some scribbler; it has been mutilated by carelessness and neglect, but its old body has been patched up, and it is surprising to see how well it looks. The title is as follows from the Museum copy:

¹ *Trans. Archæol. Soc., Glasg.*, 1883, II. p. 262, No. 4. This is another Lyons piracy, apparently. The title page is an exact copy of that of Venice 1557, so that if one did not know any better, one might be apt to conclude that this was actually the second edition.

² Mr. Quaritch's *Rough List*, No. 47, Sept. 1880.

The | Secretes | of the Reverende | Maister Alexis of | Piemovnt. | Containyng
 excellente remedies against | diuers diseases, woundes, and other accidents, | with
 the manner to make distilations, | parfumes, confitures, diynges, co- | lours,
 fusions and meltynges. | A worke well approued, ve- | rye profytable and
 ne- | cessary for every | man. | Translated out of French into English, | by
 Wyllyam Warde. | Imprynted at London by Iohn Kingstone | for Nicolas
 Inglande, dwellinge in | Poules churchyarde. | Anno 1558. | Mens. Nouemb.

It is printed in black letter in small quarto, contains seven preliminary leaves and one blank (wanting in the Museum copy); text, 123 leaves; index, 10 leaves. In the Museum copy there is inserted before the index a leaf in italics of the table either of another edition, or a cancelled leaf of a table in italics, which was never printed, the printer having set it up in black letter instead. It may be noticed here that this first edition is not mentioned either by Watt or Lowndes. They quote an edition of 1559, of which likewise I have a copy. It is entirely different in typography from the edition of the previous year, and it may be reasonably supposed that the first edition was sold off as soon as it appeared and that a new edition was called for. Of the subsequent issues of this and the other parts I have seen various examples, and I may briefly enumerate those which I have more specially examined.

In the Hunterian Library I have found two sets of Warde's translations. One of these contains the first three parts, each with a separate title-page and pagination.

Part I. The secretes of the reverend Maister Alexis of Piemont. . . .
 London, Rouland Hall for Nycolas England, 1562.

The device on this title is a draped female figure on a pedestal, holding in each hand the bridle of a rearing horse; the legend "Armipotenti Angliæ" is inscribed in the surrounding scroll ornament.

If Lowndes be correct, this must be the third edition of part I.

Part II. The seconde part of the secretes of Master Alexis of Piemont,
 . . . London, Jhon Kyngston for Nicholas Englande, 1560.

This is the first edition of this part, and like that of part I. was executed by the same printer. It has, however, an elaborate woodcut border to the title, whereas the title in the first edition of part I. is quite plain.

In the British Museum I have seen what is probably the second edition of this part, printed at London by Rowland Hall for Nicholas Englande, 1563.

Part III. The thyrede and last parte of the Secretes of the reuerende Maister Alexis of Piemont, . . . London, Roulande Hall, for Nycholas Englande, 1562.

This, I suppose, is the first edition of part III. The other Hunterian copy has parts I. II. and III. as in the preceding, except that the titles of parts I. and II. are wanting. It contains, however, the first edition of the fourth part, which was published posthumously, and was translated by Richard Androse. The title is as follows:

A verye excellent and profitable Booke containing sixe hundred foure score and odde experienced Medicines, apperteyning vnto Phisick and Surgerie, long tyme practysed of the expert and Reuerend Mayster Alexis, which he termeth the fourth and finall booke of his secretes, and which in hys latter dayes hee dyd publishe vnto a vniversall benefit, hauing vnto that tyme reserued it onely vnto himselfe, as a most priuate and precyous treasure. Translated out of Italian into Englishe by Richard Androse.

Humilia la anima tua a Dio: a gran signori fa riuerentia, al gridar del pouero inclina le orecchie.

Imprinted at London by Henry Denham, 1569.

These parts are printed in black letter, in small 4to, with separate title-pages and pagination.

Subsequently there was an edition of the first three parts, dated 1568-66, to which was added the 1569 edition of the fourth part. There is a copy of this set in the British Museum, but I have not inspected it.

Of the next genuine edition, which did not come out for some years later, there is a copy in the British Museum, but I have myself got another here. The titles are the same as in the previous editions. Parts I. and II. were "Imprinted at London, by Jhon Kyngston, for Ihon Wight. Anno Domini 1580," and have no border round the title page. The device on the titles is the same draped female figure on a pedestal holding the rearing horses as is found on the 1562 edition of part I. At the end of each part is a woodcut of the standing figure of an elderly man clothed in a doctor's furred robe, with a biretta, holding a volume marked *Sciencia*. On either side of the figure are the letters I. W. The punning legend encircling the whole is "Welcom · The · Wight : that · bringeth · such · light." The third part was "Imprinted at London, by Thomas Dawson, for Iohn Wyght, 1578." The title page has a scroll border, and the device is the doctor with the punning legend.

This edition is in small quarto, with separate pagination. It is a fine specimen of sixteenth century black-letter printing; the characters are narrower, sharper, and neater in every way than those used in the first and second editions.

The whole four parts appeared in 1595 with separate title pages, but uniformly dated and consecutively paged. I have already exhibited a copy wanting the last two leaves, but I can now place before you a perfect specimen of the book. There is no copy of it in the British Museum.

Taken together, these different examples give a very good representation of the earliest issues in English of this famous book. So far as I know it, the order of publication is as follows: Part I. 1558, Part II. 1560, Part III. 1562, Part IV. 1569; first edition collected: Part I. 1562, Part II. 1560, Part III. 1562, Part IV. 1569; second edition collected: Parts I. and II. 1568, Part III. 1566, Part IV. 1569; new corrected and enlarged edition: Parts I. and II. 1580, Part III. 1578; complete uniformly dated edition of the four parts, 1595. Both Watt and Lowndes mention other editions of the separate parts, but as I have no copies to refer to I am unable to say anything about them. The earlier joint editions seem to have been brought out irregularly as regards date; possibly the different parts were printed as they were wanted, and sets were made up with copies of different dates. The fourth part is the least common, and I have nowhere encountered a set of the first issues bound together. One in the British Museum is made up of Part I. 1558, Part II. 1563, Part III. 1562, and Part IV. 1569.

The 1573 edition of Wecker's German translation has been already mentioned.¹ There is an earlier one which, according to the colophon, was printed by Perna at Basel in 1570. Unfortunately, the copy I have wants the title page, but as Wecker's dedication to Countess Anna Alexandria of Fürstenberg is dated 1569, I presume it is of the first edition. It forms a small, very well printed octavo volume, and it contains only the first part of the Secrets, divided into six books. The reprint of 1573 is distinctly inferior, but it contains a translation of the second part. I have not seen a German translation of the third and fourth parts.

¹ *Trans. Archæol. Soc. Glasg.*, 1883, II. p. 251, and p. 262, No. 8.

A French translation of the first two parts of Alexis, along with a continuation from divers authors, by Christoffe Landré, was printed at Paris by Hierosme de Marnef and Guillaume Cavellat in 1576. It is an obese little 16mo of 911 pages, with a copious table of contents and a few woodcuts of apparatus for distillation, which was the chief chemical process of the time. In the British Museum catalogue there is a previous edition by the same printers, 1573. It also has 911 pages, but no table is specified. A shabby reprint in octavo appeared at Rouen in 1637, "reveu et augmenté." The Museum catalogue contains a later reprint, Rouen, 1691. A Lyons edition of 1620 is also mentioned, but it is not in the Museum, and I have not seen it.

It may be remarked that with the exception of the Latin version, 1560, and the English of 1558; 1562-60-62-69, and 1580-78, the remaining editions which have been brought before the Society are, none of them, in the British Museum catalogue. On the other hand, the national collection is rich in the early Italian editions, and has the French translation printed at Antwerp in 1557, a Danish version, 1648, and other editions in Latin and in German.

What impresses me with an idea of the popularity of the work, as much as the number of editions and translations, is the state in which the copies one falls in with often are. They bear evidence of having been in pretty constant use, and they are not unfrequently imperfect. Of the numerous copies of the different divisions of the work which I have consulted and exhibited in part to the Society, six or seven are defective to a greater or less extent. Consequently, though there must have been many copies with a wide circulation, it is seldom that a really fine specimen, especially in English, comes in the way of the student. The two copies of dates 1580-78 and 1595 now shown are, therefore, exceptionally worthy of notice.

In the same volume containing the first edition of Wecker's translation of Alexis, to which it forms a kind of supplement, there is a copy of the first edition of Wecker's own tract about artificial waters, of which the later issue of 1616 has been already mentioned. It was printed at Basel by Perna in 1570.

Of more interest is the English version of Wecker's Secrets, which was

translated from the original Latin by Dr. R. Read,¹ a physician. When engaged with Wecker before, I had no copy at hand; I have since got one, complete with the engraved title, but like all these books rather the worse of the wear. The engraved title contains portraits of Wecker, Read, Lord Bacon, Dr. Harvey, and three notable secret-mongers — Alexis, Albertus Magnus, and Raymund Lully. According to Watt and Lowndes, the book was first published at London in 1660. The present copy is dated 1661. It is possible that this is a genuine second edition, or it may be the original edition with a new-dated title page. In any case, the book is far from being common.

To the books already quoted may now be added Fioravanti's *Secreti Rationali*, Venice, 1564, the first edition, another, 1640, and a very much curtailed translation into Dutch of Baptista Porta's *Magia Naturalis*. This was printed at Leyden, in 1655, in a small octavo volume, and is announced as the third edition. By the elimination of a great amount of matter, the twenty books which the original contains are reduced to four, so that it is little more than the name of the Neapolitan's famous work.

By a copy now before me, I have ascertained that the Signora Cortese's collection of Secrets appeared at Venice in 1565. Whether this is the first edition or not I am unable to say, for unfortunately the authoress has not dated the dedication of her book to the most Reverend Monsignore Mario Chaboga, Archdeacon of Ragusi. The later edition of 1625 is a mere reprint of this one, without any alteration, and there was another reprint which appeared at Venice in 1677.

There is here, also, a rather famous Italian book, which, so far as my experience goes, is most uncommon. It is the first edition² of *L'Arte Vitraria*, by Antonio Neri, published at Florence in 1612. It was this work which was translated and annotated by Christopher Merrett in 1662 and 1672, which

¹ So he is called on the title page, and his initials R. R. are at the end of the address to the reader. But Watt (*Bibliotheca Britannica*, II. 794a) and Lowndes (*Manual*, IV. 2057, Bohn's edition) call him distinctly *Alexander*. I cannot account for this discrepancy, if it be not merely a blunder, unless on the supposition that the issue of 1660, quoted by these two authorities, was edited by actually a different person from that of 1661.

There is said to be an earlier edition of 1592, but I have not been able to find it.

translation again was turned into German by Kunckel. Though of no magnitude, it is interesting as being one of the earliest on the subject. Neri was engaged in the famous works at Murano, where the exquisite Venetian glass was made, and this treatise contains the result of his experience. It is undoubtedly a very important book in the history of the art. It naturally passed through a large number of editions, of which the following are in the British Museum catalogue: Florence, 1612, 1661; Venice, 1663, 1678; Amsterdam, 1668; in German, 1679, 1689, 1756; in French, Paris, 1752; in English, London, 1662, 8vo; and 1826, folio, printed by Sir Thomas Phillips, at Middlehill. Besides the 1612, 1668, 1679 editions, I have put before you also a German translation by Geissler, Frankfurt, 1678; and a Latin edition, Amsterdam, 1686, and to these may be added an edition in Latin dated 1669, Amsterdam, 12mo. This is merely a re-issue of the 1668 edition, with a new-dated title-page.

Another work on glass and another first edition is Blancourt's, *De L'Art de la Verrerie*, Paris, 1697, 12mo. Of this, the English translation of 1699 was formerly mentioned. The volume contains an account of the making of crystal mirrors in France, round which there hangs altogether so curious a history. It hardly falls within the scope of these notes to say anything about the contents of the books, for that would lead us into surveying the whole of the arts and natural and physical sciences; but a narrative of the manner in which Colbert, about the middle of the 17th century, contrived to cut into the Venetian monopoly in these much-prized objects of art would almost tempt one to turn aside from the main topic of the present paper.

On a totally different subject is the book next in order of time: Plattes' *Subterranean Treasure*, reprinted as a thin quarto pamphlet at London in 1679. There is no difference between this and the first edition of 1639.

Lastly, one more edition¹ of a famous book may be mentioned here. It is the 1786 issue of the *Century of Inventions* by the Marquis of Worcester, and it is got up in precisely the same style as those published by Foulis and by Duncan, which have been already before the Society.

Of the *Polygraphice*, by Dr. William Salmon, the 8th edition of which

¹ I am indebted for it to the kindness of Dr. J. B. Russell, of this Society.

appeared in 1701, I have since seen the 2nd edition printed at London in 1673. It is a much smaller book, and confines itself more to the secrets of the fine arts than to those of the common arts. It contains some specimens of line engraving.

All the preceding are merely additions to the list already given. The concluding part of this research will contain notices of books of Secrets which have not been previously referred to. These stretch over a considerable period of time, and are of a curious, and in certain cases of a bizarre, character. This part will include an alphabetical list of the books referred to in the present and next part.



ERRATA IN TRANSACTIONS, VOLUME II.

P. 190, line 1, *for* Basel, *read* Venice.

P. 190, line 2, *for* 1536, *read* 1555, or 1556.

P. 232. line 12, *for* 1503, *read* 1501.

Ibid, lines 15 and 16, *for* Prebend, *read* Prebendary.

P. 233, line 20, col. 2, *for* 1585 Rom. (?), *read* 1585 Romæ 8.

Ibid, notes 2 and 3, *for* Grässe *read* Graesse, and the same correction elsewhere.

P. 234, line 11, col. 2, and line 30, *for* Medina, *read* Medina del Campo.

The corresponding pages in the separate reprint of the *Bibliographical Notes*, Parts I. and II. are respectively 11, 22, 23, 24.

T. III

L. xv

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART IV

BY

JOHN FERGUSON, LL.D.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archæological Society of Glasgow, January 15, 1885.]

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET
1888

(100 Copies Reprinted.)

BIBLIOGRAPHICAL NOTES ON HISTORIES OF INVENTIONS AND BOOKS OF SECRETS.

PART IV.

BY

JOHN FERGUSON, LL.D.,

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

[*Read at a Meeting of the Society, held on 15th January, 1885.*]

B. In this part, books which have not been before referred to are to be considered.¹ They are, on the whole, rarer than any yet described, inasmuch as they have been the last to disclose themselves to me during my researches. The collections already given, far from exhausting this section of the literature of physical science in respect either of separate works or of editions, have served rather to point the way to a more comprehensive survey, and have put me on the track of works of which I had at first no knowledge. The present part deals with all the divisions of the subject originally specified: with secrets of nature, cosmogony and general science; of natural and of black magic; of medicine and surgery; of physiognomy and generation; with secrets of the arts, household secrets and technical receipts, and finally, with one or two of the first cyclopædias. The books are arranged, as far as possible, by chronology of their respective authors.

The first compiler I have to mention is the French naturalist, Antoine Mizauld, or Antonius Mizaldus, who was born at Monluçon in the Bourbonnois, early in the sixteenth century. He studied medicine at Paris, graduated and entered upon practice, in which he was so successful, as to have merited the epithet of the French Æsculapius. Under Oronce Finé, he acquired skill in astrology, working it as a branch of medicine, after the

¹*Transactions of the Archaeological Society of Glasgow*, 1886, New Series, Vol. I. pp. 188 and 227.

custom of those days. He was summoned to the Court, was a friend of the Princess Marguerite de Valois, and was a man of some mark. Persuaded that he had a nobler mission than that of healing, he relinquished his profession to devote himself to investigating the secrets of nature and to writing books. In the latter he succeeded, but in spite of his endeavours, nature kept her secrets still undivulged. He was devoted to astronomy and astrology, but he escaped the pitfall of alchemy. After what must have been a laborious life, he died in 1578.

Of those who have spoken about him, De Thou has given him praise, but it is rather overdone. He commends him for his rare learning and acumen, and says that his works will ever be esteemed by those who can judge of their themes. One fears that now-a-days there can be no competent judges; for Mizauld's works are utterly forgotten. They have, however, enjoyed a measure of popularity which has carried them down even to the present century; but a collected edition which was projected two hundred years ago by P. Ménard, a bookseller, was stopped, by Gabriel Naudé showing him that Mizauld was a very credulous person who had recorded many silly and extravagant things in his books. The result is that one can become acquainted with Mizauld's works only in their original editions, and most of these have become rare. Lists of his works, more or less complete, are given by some of his biographers.¹ They consist of almanacs and treatises on weather forecasts, on the planets, comets, cosmography and such like. Of those which may be included in the present notes, some I know only by name: *De Arcanis Naturæ libri quatuor*, Paris, 1558, 8vo; *Singuliers secrets et secours contre la peste*, Paris, 1562, 8vo; *Secrets de la Lune*, Paris, 1571, small 8vo.² This last book is of great rarity, and, on account of its contents, is somewhat in request. It treats of the connection between the moon and the earth, and the influence the satellite has on beasts, birds, fishes, men and especially women, stones, plants, trees, maladies, and what not. So the book can be judged by its title, and perhaps the author as well.

Another subject to which he paid attention was horticulture, and he wrote

¹ Freher, *Theatrum*, Norib., 1688, p. 1276. Nicéron, *Mémoires*, XL. pp. 202-213.

² Ff. [8] 24. From the British Museum copy, 718. d. 27 (1).

books on different branches of it. One of these is entitled *Secretorum Agri Enchiridion Primum*, published at Paris in 1560. It is a small 8vo, rather nicely printed. In the first book the author treats of the garden, its site, soil and moisture; of manures; of sowing and planting; of hoeing, weeding and watering; of all the pests of a garden: insects, worms, mice, moles, frogs, toads, scorpions, snakes; of protection against hail, hoarfrost and lightning, blasting and mildew. The second book treats of vegetables and flowers; the third book of fruit trees, and that of all sorts. Like his other works, this one displays the author's learning, but it shows besides that he had some practical familiarity with the subject. There are other two collections by Mizauld:

Memorabilivm Aliqvot Natvrae Arcanorum Syluula, rerum variarū Sympathias & Antipathias, seu naturales concordias & discordias, libellis duobus complectens.
Avtore Antonio Mizaldo Monlvciano.

Lvtetiae, Apud Iacobum Keruer, sub duobus Gallis via Iacobæa. 1554. Cvm Privilegio Regis.

This is a 16°, printed in italics. The above is from the British Museum copy [8460. aa. (3)], but Nicéron's was dated 1555, and he quotes also editions of Franckfurt, 1592 and 1613. I have a copy of the 1592 edition here. It is a small 16°. Nicéron says tersely: "Il y a bien des contes et des pauvetes dans cet ouvrage." That is correct, so far. From Pliny and other authors, more voluminous than critical, Mizauld collected many notable statements and anecdotes, which subsequent naturalists have replaced by others. He was a staunch believer in the harmony of nature and in the agreement and disagreement of different things, and wrote one or two books on the subject.¹ It would be interesting to trace the parallelism between the ideas of sympathy, and antipathy, and harmony, with the more recent but less pleasant notions of selection, and struggle, and survival. That, however, is for the modern naturalist to do, if he feel so disposed.

The second collection is on a larger scale, and is rather more pretentious. It was first printed at Paris in 1566, but the copy in the British Museum [1170. c. 1. (1)] which I have seen is of the following year:

¹ The titles are: *Harmonia Superioris Naturæ Mundi et Inferioris* . . . Paris., 1577, 8vo; and *Harmonia Cælestium Corporum et Humanorum* . . . Francofvrdi, M.D. XCII. 16°.

Memorabilium, vtiliū, Ac Ivcvndorvm Centvriæ Novem, in Aphorismos Arcanorum
omnis generis locupletes, perpulchrè digestæ. Avtore Anton. Mizaldo
Monlvciano, Medico. Lectori.

Omne tulit punctum, qui miscuit vtile dulci :

Ardua res, fateor, sed meditanda tamen.

Lvtetiæ, Apud Federicum Morellum, in vico Bellouaco, ad vrbanam Morum.
M.D. LXVII. Ex Privilegio Regis.

This book was often reprinted: at Cologne, 1574; Franckfurt, 1589, 1592, 1599, 1613, 1673; and at Nürnberg, 1681, under the title, *Mizaldus Redivivus*. Of these I have here the 1592 edition, printed by Wechel, which contains also the *Memorabilium* . . . *Silvola*, above referred to. It is uniform with the *Secrets* of Levinus Lemnius, printed by Wechel, in 1590. The following edition is neither in the British Museum, nor in any of the lists :

Memorabilium, vtiliū, Ac Ivcvndorvm Centvriæ Novem, In Aphorismos Arcanorum
omnis generis locupletes, perpulchrè digestæ: Avtore Anton. Mizaldo
Monlvciano, Medico. Lectori.

Omne tulit punctum qui miscuit vtile dulci :

Ardua res: tamen hæc mixta dat iste Liber.

Lvtetiæ, Apud Federicum Morellum Typographum Regium, via Iacobæa, ad
insigne Fontis. M.D. LXXXIII. Ex Privilegio Regis.

It may be noticed that in this edition the couplet on the title-page has been altered to suit the tenor of the book.

Besides the editions above mentioned there were two printed at Cologne in 1572 and 1573. These are of such excessive rarity that the edition of 1572 is mentioned only by one or two writers, and its very existence has been doubted, while the 1573 edition has, up till now, been absolutely unknown and undescribed. Of the 1572 edition, the only copies I know of in this country are in the Hamilton and Hunterian Libraries, in the University of Glasgow; of the 1573 edition, the only copy is in the British Museum (1169. a. 4).

The following is an account of these books :

Antonii Mizaldi Monluciani Galli, Medici, Memorabilium, Sive Arcanorum
Omnis Generis, Per Aphorismos Digestorum, Centuriæ IX. Et, Democritvs
Abderita, De rebus Naturalibus & Mysticis. Cum Synesii, et Pelagii
Commentarijs. Interprete de Græca lingua, Dominico Pizimentio Vibonensi,
Italo. Præfatio, In omnes hosce libros.

Coloniae, Apud Ioannem Birckmannum Anno D.M. LXXII. Cum Gratia &
Priuilegio Cæsar. Maiestat.

This is a 24°, and contains in all 52 leaves not numbered, followed by 2 blank leaves; 245 leaves, numbered, and 1 blank. The 1573 edition has the same title; it has 45 preliminary leaves, and 245 leaves numbered.

The special interest of these editions lies in their being possibly the first in which the Latin translations of the chemical writings of Democritus and Synesius, and some other Greek authors, made their appearance. As I have already communicated to the Philosophical Society what I had to say on this subject, a reference to my paper¹ there will now suffice.

In drawing up these collections, Mizauld laid under contribution ancient and modern writers alike, and extracted from them all the marvellous stories they contained, without troubling very much about their probability, or attempting to apply any criticism whatsoever. In the preface of the 1572 edition, mention is made of the best known writers on secrets, among whom are Albertus Magnus, Baptista Porta, Alexis and Levinus Lemnius. Mizauld relied also on Pliny, Nicander, Dioscorides, Galen, Ælian, and many others, as well as on private persons, whose names he does not give, but who confided to him the results of their experience. The use of oil of tartar, for example, for cleaning rusty iron, and for removing pimples from the face (the two things evidently being considered as coming under the same category), is given on the authority of a lady, *fuorum magistra*. The contents of this book are certainly worth noting, and one can only say that if certain of the secrets are true they surpass belief, and if they are not, Mizauld's belief must have surpassed credulity. At the same time, the collection, however unsuited for the present it be, is interesting, not to say valuable, as a record of many popular ideas on natural history and science, and as affording clues to the origin of popular beliefs, old-fashioned cures, and proverbial sayings.

I come next to some English works, which made their appearance in the latter half of the sixteenth century. The first of these is the compilation

¹ Read Nov. 19, 1884. *Proceedings*, vol. XVI. p. 36 and p. 287. I avail myself however of this opportunity to make a correction. In § 4 (2) Dufresnoy is referred to as having quoted only the Cologne, 1574, edition of Mizauld's book, with Democritus. He does so, under *Democritus* and under *Synesius*. But under *Mizaldus* (*Histoire de la Philosophie Hermetique*, Paris, 1742, T. III. p. 237) I find that he does mention the Cologne edition of 1572, though without saying that it too contains Pizimenti's translation of Democritus and Synesius.

called *The Englishman's Treasure*. It was printed as early as 1596, and repeatedly afterwards. The copy I have is of the seventh edition, and it is dated 1696, but this does not agree with the British and Hunterian Museum copies, both of which are dated 1626. This work has a detailed title, of which the following are the leading items :

The Englishman's Treasvre. With the true Anatomie of Mans Body:¹ Compiled by . . .
 Mr. Thomas Vicary Esquire, . . . Chyrurgion to King Henry the 8. . . .
 Whereunto are annexed many secrets appertaining to Chyrurgerie with diuers
 . . . Remedies for all Captaynes and Souldiers, . . . with Emplaisters . . .
 with other Potions and Drinkes . . . Also the rare Treasure of the English
 Bathes: Written by William Turner. . . . Gathered and set forth . . . by
 William Bremer. . . . And now seuenthly augmented . . . with almost a
 thousand approued Waters and Medicines . . . as also Oyntments and
 Plaisters; . . . by G. E. . . . With a necessary Table, for the ready finding
 out of any secret therein contayned.

Printed at London by B. Alsop, and Tho. Favvcet . . . 1696. (1626).

It is a small black letter quarto, and the copy I have has been much used ; has, indeed, been misused. This is a collection of medical secrets, and is the predecessor of several books on the same subject to be mentioned hereafter.

The volume which follows is the earliest of a series upon natural history, the contents of which are entertaining :

¶ Certaine Secrete wonders of Nature, containing a descriptiō of fundry strange things, seming monstrous in our eyes and iudgement, bicause we are not priuie to the reafons of them. Gathered out of diuers learned authors as well Greeke as Latine, sacred as prophane. By E. Fenton. Apres fortune cspoir. ¶ Seene and allowed according to the order appointed.

¶ Imprinted at London, by Henry Bynneman dwelling in Knight-rider streat, at the signe of the Mermaid. Anno. 1569.

Cvm Privilegio Ad Imprimendum Solvm.

This is a small 4°, printed in black letter, with large woodcuts of the marvels and monsters described in the text. Among these we find mention of the death of Pliny by the eruption of Vesuvius. In the accompanying illustration, Pliny, in the costume of a doctor of the sixteenth century, is

¹ This tract was printed by itself in 1577, and probably earlier. Watt (*Bibl. Brit.* 933 y), quotes an edition of 1548, but he seems to confuse the *True Anatomie* with the various editions of the *Englishman's Treasure*.

standing as if he were giving an experimental lecture on cataclysmal geology, and does not seem in the least put about by the flames that are bursting not only from the rocks but from his left shoulder, the cloak wrapt round his right leg and other important parts of his attire. Curtius, we are told, leapt into the gulf "by a deceit of Sathan," a reading of Roman legend somewhat anachronous, and not complimentary to Curtius, who would thus seem to have been doubly taken in.

The book opens with "Sundry Abvses and wonders of Sathan," with a portrait of his swarthy majesty as he is worshipped at Calycut, "one of the "most riche and famous cities of the Indyans." Almost as fearsome was the creature born at Cracow, 1543,

"who although he were begotten of honorable parents, yet was he most horrible, deformed
 "and fearefull, hauing his eyes of the colour of fire, his mouth and nose like to the snoute of
 "an Oxe, wyth an horne annexed thereunto like the trumpe of an Elephant, all hys backe
 "shagge hairde like a dogge, and in place where other men be accustomed to have brests,
 "he had two heads of an Ape, having above his nauell marked the eies of a cat, and ioyned
 "to his knee and armes foure heades of a dog, with a grenning and fierce countenance: the
 "palmes of his feet and handes were like to those of an ape: and amongst the rest, he had
 "a taile turning vp so hie, that the height thereof was half an elle: who after he had liued
 "foure houres died, saying only: 'Watch, the Lorde commeth.'"

This most delicate monster made a sensation at the time, and is referred to by a number of writers.¹

And then Fenton proceeds to discuss the very difficult problem of incubi and succubi, and whether devils can have children, and on general principles decides in the negative, therein differing from certain experts, who, like Delrio,² have made the physiology, and manners and customs, and domestic habits of devils their peculiar study.

Among the wonderful things of the ocean the poor seal is exaggerated into a terrible monster.

¹ Cardan, *De Subtilitate*, Lugd., 1554, p. 474; Cornelius Gemma, *De Natura Divinis Characterismis*, Antverp., 1575, I. p. 96, who gives a rather poor picture of the prophet; Peucerus, *Commentarius De Præcipuis Divinationum Generibus*, Francof., 1607, p. 728; Wolfius, *Lectiones*, 1600, II. p. 510, with a portrait. Curiously enough, these writers do not agree as to the birthplace of the monster, and they differ also in some details of his construction.

² *Disquisitiones Magicae*, Lib. II. Quæst. xv., contains a discussion on the subject.

There is a portrait (f. 82) of one Denis Heracleot, who became so fat with eating and drinking and no exercise, that he had horse leeches constantly engaged draining off the superfluous humours. There is a vivid presentation of the wriggling leeches all busy at work.

The author has gotten together a choice selection of monsters, pictures of which are given. The horse with "all his skinne checquered and deuided into great panes, after the order of the Dutchemens hose," again appears;¹ animals and human beings with a superfluity or deficiency or mal-arrangement of legs, trunks, arms, &c., are not wanting; and there is a gruesome picture of one of which this description is given:

"There is founde by sufficient authoritie in writing, that in the yere. 1496. was taken vp out
 "of the riuier of *Tyber*, a monster, hauing the tronke of the body of a man, the head of an
 "Asse, one hand and arme like to a man, and the other of the fashion of an Elephantes foote:
 "he had also (according to the portraict you see) one of his feete like the foote of an Eagle, and
 "the other like the hoofe of an Oxe, his belly like a woman with two duggs, and the rest of
 "his body with skales: he had also growing out behynde him, a head olde and hairie, out of
 "the which came an other head of the forme of a Dragon."

This fellow is mentioned also by Peucer, and an inaccurate portrait is given by Gemma.

Of this very rare book I know only of the copy in the British Museum (1251. e), and it is imperfect. It is much to be regretted that there is no reprint of this and other books of the same kind, and that while there have been and are societies for reprinting and preserving anything in verse, however trivial, there never has been one for rescuing from absolute destruction the knowledge and notions about natural things current long ago. Fenton's book would certainly stand reprinting. It is full of choice absurdity, and some of the stories, which will hardly transcribe, exhibit the compiler's credulity and simplicity. He had an unwavering belief in devils and spirits, and the warfare they carried on against humanity. And yet there were more credulous people even than himself; for he tells, not without satisfaction and an air of superior knowledge, the story of Augustinus Lavisarius, "Secretary of a certaine Prince, the which by reason of his ignoraunce in the cause of his Eccho, was in daunger to be drowned;" for the said secretary on a journey, riding out of his way, was benighted, and coming to a river bemoaned himself,

¹ *Trans. Archaeol. Soc. Glasgow*, 1883, vol. II. p. 193.

and was answered from the other side. Whereupon he began to converse with this voice, and was persuaded to enter the river, which he, at last, got through with great pains by his horse swimming. He told Cardan of his adventure, "in sorte as if it had bene the malice of an euill sprite that wente aboute to drowne him; & telling the place & every circumstance in order, Cardanus smelled forthwith the ignorance and simplicity of the Secretary, knowing that in that place was a wonderfull Eccho." Cardan took the secretary to the place and gave him a demonstration, or experimental proof of the same. Let us hope that the secretary was a wiser man for his lesson, and let us also lay to heart that even in the days of Cardan and Fenton there were degrees of ignorance of natural things.

The ladies of these lands were wont to pride themselves upon their huswifery, their management, their dexterity in all the practice of cooking and preserving. In the earlier times unless the good wives attended to these matters, no one else could. There was no "machinery in motion" for making marmalade or jam by the ton, in 1585, but there was rivalry among the ladies, and they had receipts and secrets which they would not reveal, although they were very willing to be praised for the results.

Numerous volumes of these secrets—which are somewhat different from cookery-books—were published under various names.

There was a work of this kind compiled by John Partridge :

The treasure of commodious Conceites, and hidden Secrets. Commonly called, The good Hufwiues Clofet of provision, for the health of her household. Meete and necessarie for the profitable vfe of all estates. Gathered out of fundry Experiments lately practifed by men of great knowledge: And now the fourth tyme corrected, and enlarged, with divers necessary and new additions.

At London, Printed by Richarde Ihones: dwelling at the signe of the Rose and Crowne, neere Holburne Bridge. 1584.

It is a small 8vo, signatures, A-E, F 4 (=ff. 44); printed in black letter, except the dedication, the table, titles to the sections, &c., which are in roman. There is a copy in the British Museum (1038. f. 42.)

There was a very nice reprint of it in 1586, at London, by Henry Car; sigs. A-E, F4 (British Museum, C 31. a. 15). Other earlier editions appeared in 1573, 1580, but these I have not seen.

This little tract contains some cookery receipts, among others how to make marchpanes, green ginger, ipocras, conserves of all kinds, sweet powders, fumigations, medical receipts for domestic purposes, waters, solvents for grease and other spots in silk, velvet, cloth, "a soueraigne remedy for the cough," and a few other curious things.

A later edition is the following (British Museum, 1037. e. 2):

The Treasurie of hidden Secrets. Commonlie called, The Good-hufwiues Clofet of prouision, for the health of her Houfhold. Gathered out of fundry experiments, lately practifed by men of great knowledge: And now newly enlarged, with diuers necessary Phificke helps, and knowledge of the names and naturall difpofition of difeases, that moft commonly happen to men and vvomen. Not impertinent for euey good Hufwife to vfe in her houfe, amongft her owne familie.

At London, Printed by I. R. for Edward White, and are to be fold at his fhop at the little North doore of Paules, at the figne of the Gunne. 1600.

Small 4to. Sigs. A-I (=ff 36). Black letter, but title and address in roman. The initials I. R. stand for I. Roberts; but at the end of the preface they are put R. I., *i.e.*, Richard Ihones, as in the earlier edition. According to the address or preface, this is a combined edition of Partridge's *Treasurie* and a small cookery book printed by Ihones, newly arranged, and the superfluous matter omitted. It is larger, but not nearly so well printed as the earlier editions.

Another work similar to Fenton's, but not so large and racy, is the following:

The Secrets and wonders of the worlde. A Booke Ryght rare and ftraunge, con-
taying many excellent properties, giuen to Man, Beastes, Foules, Fishes,
and Serpents, Trees and Plants. ¶ Abstracted out of that excellent naturall
Historiographer Plinie. Translated out of French into English.

At London Printed for T. Hacket, & are to be fold at his fhop in Lumberd ftreete,
vnder the Popes head. 1587.

This is a small black letter 4to, with the title enclosed in an ornamental scroll border. A copy is in the British Museum (7004. aa).

T. Hacket addresses the book to his friend, Rycharde Candler, and calls it "thys Abstract of Plinie," and in the note to the reader it is said to be "abstracted out of the syxteene fyrst bookes of that excellent naturall Historiographer Plinie."

The first section contains an abstract of the first six books, called *Secrets and Wonders of the World*, then the following ten books have each a section: Book 7th, of Man; 8th, *Beastes on the Earth*; 9th, *Water Beastes and Fishes*; 10th, *Foules of the Ayre*; 11th, *Little Beastes*; 12th, *Sweet smelling Trees*; 13th, *Straunge Trees*; 14th, *Trees and Fruitfull Plants*; 15th, *Trees bearing Fruite*; and 16th, *Wylde Trees*.

It gives a very brief view of Pliny's notions, some of which are correct enough, others wild to a degree. It must not be forgotten, however, that from Pliny came much of the wonderful natural history recorded by Fenton and others, prior to the modern period of exact observation. So that it is in their books that one learns the earlier ideas current about the physical and natural sciences.

The craving, however, for knowledge of Nature's secrets was not satiated by the preceding, for others were put forward to meet the demand. One of these was the following:

Cornvopieæ, Or diuers secrets: Wherein is contained the rare secrets in Man, Beasts, Foules, Fishes, Trees, Plantes, Stones and such like, most pleafant and profitable, and not before committed to bee printed in English. Newlie drawn out of diuers Latine Authors into English by Thomas Iohnfon.

At London. Printed for William Barley, and are to be sold at his shop at the vpper end of Gracious streete nere Leaden-Hall. 1595.

Small 4to. Black letter. Signatures A—F, or 24 leaves in all, whereof A1 is blank. There is a copy in the British Museum (546. g. 12).

To Thomas Johnson's perusal of the Latin authors we are indebted for the knowledge of some very important secrets. Some may be quoted:

There is a little fish called *Echines*, which cleaving to the keele or mast of the Shippe, will so retaine the shippe that no violence of winde or weather can remoue it.

The *Satyres* have heads like vnto men, and bodies like vnto goats, and are capable of reason and speech, which is both strange and wonderfull.

The *Loadstone* hath vertue to draw yron to it: yet if you holde a *Diamond* by him, that vertue will be taken away so long as the adamant is by him.

If anythinge be laid in salt and there left remayning, in process of time it becommeth salt itselfe.

The weasell and the mouse are at deadlie hate, so that if you put the braine of a weasel into your rennet or cheeslepe wherewith you gather the curde of cheese, the mise will never taste or eate the cheeses. [Plainly there would be no use in baiting a mouse-trap with such beweaselled cheese.]

The lobster so feareth the fish polipus, that at his sight he dieth incontinent.

The elephant thought ncucr so outrage, yet seeing a ramme is eftsones tamed.

A bull though ncuer so fiercc, becommeth quicklie verie gentle bceing tyed vnto a figge tree. [Quite effective, doubtless, if one can get a fig-tree, and tie the bull to it.]

When the Oister gapeth for airc against the tide, the Crabbe putteth a stone betweene the two shelles to keepe them open while he eateth the meate.

The Eele commeth or is engendred of the earth and mud without anie spawne, neither is there either male or female of them. [Spontaneous generation.]

In Aethiope by a towne called Debris is a well of a strange property, for the water in the day time is cold as yce, and in the night it is boyling hote.¹

Italie hatcheth stately mindes, Fraunce excesse of pride, England couetousnesse, Scotland craftinesse, Ireland lasinesse [poor Ireland !], Flaunders drunkennesse.

These are only a few of the wonders this book contains. Again one must regret that there is no Society for reprinting such very scarce books on the secrets of nature. One may feel inclined to scorn the author, but he has something to say for himself at the very beginning of his tract :

Manie are the woonders & mermailes (*sic*) in this world, and almost incredible, were it not that experience teacheth the contrarie: for who could bee perswaded to belecue that the Owstridge could eat or deuoure cold & hard Iron, or that hote burning Iron could not hurt her stomacke, were it not that it hath and is daylie seene and knowne.

To experience, therefore, Johnson appeals, and the modern naturalist and physicist do the same. If there is a discrepancy in the results, it rests with the historian of science to ascertain whence it arises. The question also suggests itself if there will be as much difference between the natural history of to-day and the results of experience three hundred years hence, as there obviously is between the works of Fenton and Thomas Johnson and, say, the reports of the Challenger Expedition?

A collection of a different kind, by Thomas Lupton, who was known besides as a religious and dramatic writer, also appeared in the sixteenth century; but

¹ This is

“The fount that play’d
In times of old through Ammon’s shade,
Though icy cold by day it ran,
Yet still, like souls of mirth, began
To burn when night was near.”

the oldest copy I have seen is dated 1601. It is in the British Museum,¹ and has this most discriminative title :

A Thousand Notable things of sundrie sorts. Whereof some are wonderfull, some strange, some pleasant, diuers necessary, a great sort profitable, and many verie precious. Newly corrected. [*6 Couplets beginning: This Booke bewraies that some had rather hide, &c.*]

At London, Printed by I. Roberts for Edward White, and are to be solde at the little North doore of Paules, at the signe of the Gunne. 1601.

In this edition there are only ten books. It is a terrible jumble, taken from Evonymus—the *New Jewel of Health*, which the author calls “a book of much value and small price,” qualities just reversed at the present time—Wecker, Mizaldus, Albertus, Levinus Lemnius, and many others, with no sort of order or principle of arrangement, for which, however, the author apologises. There are medical, technical, natural history, and other secrets, stories from the ancients, all sorts of queer receipts, the objects to be gained by them not being always obvious. Extracts could give little or no notion of the thousand paragraphs the book contains. One singular feature, copied from some of the older books, is a sort of certificate in the form of the word *proved*, attached to many of the receipts. Even with this guarantee one feels doubtful about the success of some of the receipts.

There was a demand for this collection however, for it appeared again and again during the following centuries. In the Museum Catalogue are copies with the dates 1627, 1631, 1660, 1675, 1686. Then there is a long blank, for the remaining copies are dated 1793 and 1815. Besides these there are other three which I can show. The title of the earliest of them is very lengthy, containing as it does, an abstract of the contents. It was printed at London, for G. Conyers, and, like other books by Conyers, has no date. There is a preface nominally by Lupton, who supposes that this is the twentieth impression. It is more probable, however, that this preface has been copied from some earlier edition, and does not refer to this one at all.

The title of the next edition is as follows :

A Thousand Notable Things, on Various Subjects. Disclosed from the Secrets of Nature and Art, Practicable, Profitable, and of great Advantage, Set down

¹ 7321. bbb. Chalmers' copy.

from long and curious study and experience for the greater part; and the rest taken from the most judicious and celebrated authors of the Antients and Moderns. Being a rich Cabinet of select Curiosities and Rarities, in one volume, digested into fourteen books, for the general use, and good of Mankind, with strict amendments and large additions, to what formerly has been published in this kind, exceeding any other for the multitude of pleasing variety herein to be found.

London: Printed for J. Wilkie. No. 71. St. Paul's Church-Yard; and E. Easton, at Salisbury. 1776. [Price, sew'd, 1s. 6d.]

The copy from which the above is taken, is as clean as when it left Wilkie's shop. It is "sew'd" in blue paper covers, and it is not only uncut, but except for a couple of sheets at the beginning, it is unopened. The temptations of the title-page have been thrown away on the previous owner.

The third copy has the same title, but it was "printed for T. French, & W. Millar. MDCCXCV." This edition is in every way inferior, the paper and printing being very poor.

In these later editions, four books have been added to the original ten. When this increase was made I do not know, but some of it is comparatively modern.

Out of curiosity I examined the edition printed in 1815 (British Museum, 1036. c. 8), which is in 12mo.

The following is the title:

A Thousand Notable Things, on various Subjects; disclosed from the Secrets of Nature and Art; Practicable, Profitable, and of Great Advantage; Set down from long and curious Study and Experience, for the greater Part; and the rest taken from the most judicious and celebrated Authors of the Ancients and Moderns. Being a *rich Cabinet of select Curiosities and Rarities*, in one Volume, digested into Fourteen Books, for the general Use and Good of Mankind; with strict Amendments, and large Additions, to what formerly has been published in this Kind; exceeding any other for the Multitude of pleasing variety herein to be found. To which is prefixed, The Century of Inventions, by the Marquis of Worcester, 1655 (*sic*); Also, A Discourse on the Emigration of British Birds.

London: Printed for Walker, Edwards, and Reynolds, Paternoster Row. 1815.

This is hardly an exact reprint. The first ten books are taken from Lupton, but with some omissions and alterations. The wonderful thing is that Lupton's book, in any shape or form at all, should have been re-issued within the last 70 years. At that time there must have been people who

credited the marvels Lupton had collected. These marvels were pardonable in 1601, for Lupton thought he was doing good service in gathering them into a place where they might be accessible to all—but in 1815! Still more wonderful is it that Lupton's book was reprinted by Griffin & Co., publishers of modern scientific works, at Glasgow, in 1827. It is amazing to think that what passed current for science in the sixteenth century was reproduced unchanged for the edification of the generation immediately preceding the present; that the notions of Albertus Magnus, and Alexis, and Mizaldus, and Fenton, and Johnson and all the rest—"Proved"—found acceptance with a public, evidently incapable of understanding the progress of natural and physical and applied science due to the lapse of 250 years, and to the labours of Newton, and Linnæus, and Buffon, and Priestley, and Lavoisier and Davy, and a multitude of others. To such persistent vitality of error, and there are other instances, which will be mentioned below, what can one say? Only that the thousand and first notable thing is the survival of Lupton's book, and that its survival is so discreditable as to be instructive.

The *Century of Inventions* is reprinted both in the 1815 and 1827 editions.[†]

The following collection is in Spanish, a language in which I have met with very few books on the subject of these notes, and the description is from the British Museum copy (7383. f):

Phisonomia y Varios Secretos De Natvraleza : Contiene cinco tratados de materias diferentes, todos reuistos y mejorados en esta tercera impression, a la qual se han añadido muchas cosas notables y de mucho prouecho. Compuesto por Hieronymo Cortes, natural de la Ciudad de Valencia. Con Licencia, En Tarragona, por Felipe Roberto, Año, 1609.

Small square 8vo, ff [4] 115, [1]. This is the third edition, and there followed others in 1612, 1644, 1675, 1681, 1750? and at Paris so recently as in 1850 and 1858, by Garnier Frères, in 16°. The last is enlarged by numerous other secrets. Its title is:

Fisonomia, y varios secretos de Naturaleza, por Gerónimo Cortes, Natural de la Ciudad de Valencia.

Paris, Libreria de Garnier Hermanos, . . . 1858.

16°, pp. 320. All after p. 259 is wanting in the 1609 edition.

[†] See Dircks' *Life of the Marquis of Worcester*, London, 1865, p. 375.

These two titles and the other dates are from the British Museum copies and catalogues respectively. I have here besides the 1612 edition. It is a poor little volume, printed on miserable paper, at no less renowned a place than Alcalá. The title is practically the same as that of the edition of 1609, but in the present copy there are only four out of the five tracts specified in the title. When complete it contains ff. 132.

Among the authorities to whom Cortes is indebted are Scotus, Arnaldus, Pliny, Herrera, Mizauld, Cardan, Albertus, Porta, "y Don Alexios Piamontes," so that we know pretty well what we have to look for. The same old nonsense which was excusable in 1609 and 1612, but who could possibly want it in 1858? This is another instance parallel to Lupton's, only the reprints are of a still more recent date. The survival of such collections cannot be due to accident; there must be a number of persons at the present time who purchase these books. It is astonishing, however, that such should be the case, and that books like these should survive quite unchanged for hundreds of years and come out in the most modern dress, with all the authority that modernness bestows. Any one examining the 1858 edition would judge it to be a new book, not a reprint of one which had appeared 250 years before.

A certain Scipion Dupleix was born in 1569, went to Paris, became historiographer of France, and published a history in 1621-43. He wrote several works and, in particular, that which concerns us at the present moment: *La Curiosité Naturelle*. The edition of this, which I have seen, was printed at Rouen in 1638, along with other two treatises by him, but there must have been an earlier one,¹ for the English translation—which by the way is much abridged—was printed three years earlier, in 24°:

The Resoluer; or Curiosities of Nature. Written in French by Scipio Du Plesis . . .
London Printed by N. & I. Okes . . . MDCXXXV.

This title page is engraved by W. Marshall, and has Plato and Aristotle right and left; an astrologer, with Time and Death, at the top; and at the

¹ Niceron, *Mémoires*, XLIII. p. 107, quotes a Lyons edition of 1620. He calls it a "dangerous work." Some modern booksellers would call it "facetious." Niceron would perhaps have been satisfied with the bowdlerising of the English version.

bottom, Jason, and an alchemist in the last stage of destitution and frustrated hope.

The topics are arranged alphabetically, and are discussed in the form of question and answer, the replies being worthy of the conundrums. One sample of the wisdom of Scipion Duplex will be quite enough (p. 164):

Q.—Wherefore is it that little children have their noses turned up?

A.—It is as saith Aristotle, that they have their blood boyling; and the heate hindereth the superfluous matter to extend it selfe: now the nose is a cartilage, and a cartilage is a kind of bone, and a bone is a superfluous and insensible matter.

Throughout the 269 closely printed pages of the French original, the majority of the questions are as profound, and the answers as conclusively explanatory as the preceding. Scipion was “counsellor and historiographer to the French King.” On what subject could Scipion’s counsel have advantaged his Majesty?

The same year there was published a treatise by a Scotchman, the like of which, if we are to believe the gratulatory verses prefixed, had never been seen before. Of David Person, the author, I have not been able to find any notice; but he must have been well known, for among those who commend his cyclopædia are Drummond of Hawthornden and Arthur Jonston, and the copy I have was the author’s gift to Robert Gordon of Gordonstoun. The treatise is divided into five parts, or books. The first is a discourse of the secrets of nature in heaven, air, sea and earth; the second treats of meteors, comets, falling stars, wind, thunder, hail, snow, earthquakes; the third of armies, duels, death, laughing and mourning, and mental reservation; the fourth contains curiosities, divine philosophy, agreement of the ancient philosophers with Christian professors, sleep and dreams; while the last deals with the numbers three and seven, miracles and prodigies, the philosopher’s stone, the world, and metaphysicks; in some of which collocations humour might be suspected to lurk, had not the author been a Scotchman. The title is an appropriate one:

Varieties: Or, a Svrveigh of Rare and Excellent matters, necessary and delectable for all sorts of persons. Wherein the principall Heads of diverse Sciences are illustrated, rare secrets of Naturall things unfoulded, &c. Digested into five Bookes, whose severall Chapters with their Contents are to be seene in the

Table after the Epistle Dedicatory. By David Person, of Loghlands in Scotland, Gentleman.

Et quæ non prosunt singula, juncta juvant.

London, Printed by Richard Badger, for Thomas Alchorn, and are to be sold at his shop, in Pauls Church-yard, at the signe of the green-Dragon. 1635.

It is almost the only collection of secrets by a Scotchman that I have encountered.

Medical receipts and secrets have always been in request, and a good many collections of them appeared in the seventeenth century. Here is one :

A Choice Manual, or Rare Secrets in Physick and Chirurgery : Collected, & practised by the Right Honorable the Countess of Kent, late deceased. Whereto are added several Experiments of the Vertue of Gascons powder, and Lapis contra Yarvam by a Professor of Physick. As also most exquisite ways of Preserving, Conserving, Candyng, &c. The Nineteenth Edition.

London, Printed for H. Mortlock at the Phoenix in St. Pauls Churchyard. 1687.

This is in two parts, the first containing the medical secrets, and the second—which has separate pagination and on its title page is called *a True Gentle-womans Delight*—containing the receipts for cookery and preserving. Prefixed there is a lugubrious portrait of Elizabeth, late Countess of Kent. I have failed to ascertain when this collection was first published. The earliest editions mentioned are dated 1653, 1656, the twelfth in 1659, all with portraits. Elizabeth, second daughter of Gilbert Talbot, Earl of Shrewsbury, and wife of Henry de Gray, Earl of Kent, died at her house in White Friars, December 7, 1651. Little or nothing is said about her, except that her claims to authorship were the least of her merits ;¹ but negative praise, after all.

Another is in the British Museum [E 1302 (1)] :

Physical Rarities, containing the most choice Receipts of Physick, And Chyrurgerie, For the Cure of all Diseases incident to Mans Body. Being a rich Jewell, kept in the Cabinet of a famous Doctor in this Nation ; stored with admirable Secrets and approved Medicines. Published by Ralph Williams, Practitioner in Physick and Chyrurgerie.

London, Printed for J. M. and are to be sold by George Calvert, at the half Moon in Watling-street near S. Auftins Gate. 1651.

¹ Walpole's *Royal and Noble Authors*, by Park, London, 1806, Vol. III. p. 44. J. Granger, *A Biographical History of England*, 5th Edition, London, 1824, Vol. III p. 209, gives a list of the portraits of the Countess of Kent.

Of these medical receipts, for the cure of the heritage of the flesh, some are plausible and possibly ameliorative, others are impossible and absurd, some are disgusting, and some, I suppose, are absolutely negative.

Still another, specially intended this time for the ladies, appeared at London in 1656, entitled: *Queen Elizabeths Closset of Physical Secrets . . . Collected by the elaborate paines of four famons (sic) Physitians, and presented to Queen Elizabeths own hands.* It was a curious dish to set before a queen, who—except as mother of her people—had no personal interest in the subject. Prefixed is a portrait of her majesty, by Elstrak, and there is a verse below it which shows what a matter-of-fact man the publisher must have been.

Thomas Willsford pursued a different line of investigation, as is seen by the following:—

Natures Secrets. Or, The Admirable and wonderfull History of the generation of Meteors. Particularly describing, the temperatures and qualities of the Four Elements, the Heights, Magnitudes, and Influences of the fixt and wandring Stars: the efficient and finall causes of Comets, Earthquakes, Deluges, Epidemical Diseases, and Prodigies of precedent times; Registred by the Students of Nature. Their Conjecturall presages of the Weather, from the Planets mutuall Aspects, and Sublunary bodies: with the proportions and observations on the Weather-glass, with Philosophicall paraphrases rendred explicately, usefull at Sea and Land. By the industry and observations of Thomas Willsford, Gent.

Venite & videte opera Domini, quæ posuit prodigia super terram, Psal. 45. v. 8. London, Printed for Nath. Brook at the Angel in Cornhill. 1658.

Prefixed is a portrait of the author, by R. Vaughan, and appended is a catalogue of books sold by N. Brook. The portrait is usually wanting, being removed by “Grangerites,” whose self-contradictory business it is to illustrate some books by despoiling others. This treatise is almost entirely devoted to astronomical calculations and to weather predictions from the conjunctions of the planets; but the title itself gives as complete an account of the book as is required here. I presume that it is one of the earliest treatises on meteorology, but it is unknown. Watt mentions a treatise on arithmetic, by Willsford, but not “Natures Secrets.” Lowndes has not his name at all.

In 1661, at Oxford, the abode of sweetness and light, a certain Robert Lovel perpetrated a *Panzooryktologia*, a discourse on all animals and minerals,

He, too, seems to have laid out a course of reading of the old naturalists and secret-mongers, and to have put down systematically for his book what he found in them. He has not styled his gatherings secrets, but they are so, with a vengeance. His credulity is great, greater by 150 years than that of Mizauld. He repeats quite gravely that caterpillars are formed from dew congealed upon cabbage leaves by the sun, and that fleas are generated from dust and in dog's hair from sweat. It is Lepidus who says: "Your serpent of Egypt is bred now of your mud by the operation of your sun, so is your "crocodile;"¹ a height of great argument which your evolutionist has not yet reached. Lepidus, it is true, had been dining, but Lovel was evidently in sober earnest when he made the above statements. And yet in Lovel's time Boyle was living at Oxford, the Royal Society was collecting May-dew—perhaps for congealing into caterpillars—physical science, chemistry, and pharmacy were progressing, and important discoveries were making. Lovel, I suppose, wrote for such as prefer the marvellous, sensational, and mysterious, to the brightest light of their time; for the kind of people who in 1827 consulted Lupton, or in 1858 studied the nature of man in Cortes' *Phisonomia*. It is so yet, for along with a gyratory kind of advance in medicine, the student of the ways and beliefs of the uneducated tells us of the survival of an old occult medicine still to be found in operation, and there is a market even now for the secrets of Albertus Magnus and Albertus Parvus. Five years later Lovel produced his *Panbotanologia*. This I have not seen, which I regret, for if it be on the same scale as the preceding, it must be a remarkable collection.

T. K., a Doctor of Physick, published at London in 1680 a small treatise entitled:

The Kitchin-Physician: or, a Guide for Good-Housewives in Maintaining their Families in health. Wherein are described the Natures, Causes, and Symptoms of all Diseases inward and outward, . . . Prescribing natural, useful, and proper Medicines both in Physick and Chirurgery, . . . Adorned with Sculptures, shewing the proper place of every Distemper in the Body.

This was a sort of forerunner of Buchan, but not nearly so large. The drugs are mostly of vegetable origin, but there are a few, fortunately long ago

¹ See Johnson's *Cornucopia*, 1595, above, for the spontaneous generation of eels from mud.

expunged from the pharmacopœia, which show what funny notions our forefathers had of the virtues of some substances.

In 1683 appeared another:

The Queens Closet opened. Incomparable Secrets in Physick, Chyrurgery, Preserving and Candyng, &c. Which were presented to the Queen: By the most experienced Persons of the Times, many whereof were had in Esteem when she pleased to descend to private Recreations. Corrected and Revived, with many new and large Additions: together with three exact Tables. *Vivit post Funera Virtus.*

London, Printed for Obadiah Blagrove, at the Sign of the Black Bear in St. Pauls Church-yard. 1683.

[Prefixed is a portrait of "Heneretta Maria Late Queen of England."]

This work is in three parts: the first, called "The Pearl of Practice," contains medical and surgical receipts; the second, "A Queen's Delight," deals with preserving, candyng, and so forth; the third is entitled "The Compleat Cook." Each part has separate title, pagination, and index. There were several editions; 1655, 1671, 1679, and 1710 are mentioned by Lowndes; the above, which is omitted by him, is the only one that has come under my own observation.

The next is a medical collection, not mentioned by either Watt or Lowndes, and not included in any list of the author's works which I have consulted.

The Secrets of the Famous Lazarus Riverius, Councillor & Physician to the French King, And Professor of Physick In the University of Montpelier. Newly Translated from the Latin, by E. P. M. D.

London, Printed for Daniel Brown, at the Black Swan and Bible without Temple-Barr. MDCLXXXV.

This is an interesting book. It gives the chemical preparation of a large number of compounds and their medicinal virtues and uses. Here one sees the laborious methods resorted to to prepare substances which could now be got in far shorter time, with far less trouble, and with far better result. The difference is simply due to the older process being hap-hazard, and to the modern being the outcome of rational theory, based on experimental data.

A work compiled "not only for Delight, but for the Accomplishment of the Female Sex," was published by a certain John Shirley, in 1687, under the seductive and socialistic title of *The Accomplished Ladies Rich Closet of Rarities: or the Ingenious Gentlewoman and Servant-Maids Delightfull*

Companion. This, though small, is a comprehensive collection, as it includes distilling, wine-making, preserving, carving, cosmetics, medical and surgical receipts for females; taking out spots and stains, washing, scouring gold and silver lace; cooking and baking; bills of fare, dairy-maid's directions; and many other useful pieces of information, and finally, a second part relating to the deportment of a young gentlewoman.

Such a book was doubtless of very great assistance to the young gentlewoman of two hundred years ago, if she read it. The ladies of that time were obviously not only expected to be skilled in many practical duties which they would be surprised at having to undertake now, but they evidently took much pride in their skill. Every house was obliged to be self-furnishing. There was far less subdivision of labour; as has been before observed, there was no wholesale manufacture of all sorts of foods and preserves; and every house was apparently expected to cure most of its own ailments. Medicine was traditional and purely empirical; its secrets were personal to the practitioner—not as now, based on sciences the secrets of which can be learned only by hard study and years of labour. Household curing seems to have been chiefly in the hands of the ladies, and these books show that there were hardly any diseases they might not be called on to deal with. In the successful results of their treatment they unquestionably had often direct interest; but one can imagine even the qualified female practitioner of the year 1885 undertaking some of the cases with reluctance.

Another series was published in Italian:

Breve Compendio di Maravigliosi Secreti Approuati con felice successo nelle Indispositioni Corporali. Diviso in Quattro Libri.

Nel Primo. Si tratta di Secreti Medicinali.

Nel Secondo. Di Secreti appartenenti a diuerse cose.

Nel Terzo. Di Secreti Chimici di varie Sorti.

Nel Quarto. D'Astrologia Medicinale.

Con vn Trattato per conseruarsi in sanità. Dato in luce dal Signor Fr. Domenico Avda Capo Speciale nell' Archiospedale di S. Spirito in Roma. Con nuoua Aggiunta dell' istesso Auttore.

In Venetia, M.DC.XCII.

Appresso li Prodotti. Con Licenza de' Superiori.

This is a miscellaneous collection, as the title itself shows, and it has no pictures. It was translated into French and appeared in the following garb:

Les Admirables Secrets de la Medecine Chimique Du Sr. Joseph Quinti, Docteur Venitien. Qu'il a reeeuillis avec beaucoup de soin & de travail: lesquels ont été plus d'une fois experimentez par lui-même en plusieurs infirmitéz, & maladies dangereuses. Traduction Nouvelle de l' Italien, enrichie de figures. A Venise, Et se vend A Liege, Chez J. F. Broneart. M.DCCXI.

I do not know what relationship there may have been between Domenico Auda and Dr. Quinti; but if they were different, and Dr. Quinti was later than Signor Auda, then he, Dr. Quinti, has laid claim to the making of a collection "beaucoup de soin & de travail" to which he has certainly no right. The translator has not disclosed his name. The three pictures are copies of those in the secrets of Albertus Magnus, where they really do illustrate the text. In Quinti's books, however, they refer to nothing and are introduced for no obvious purpose, unless to persuade the unwary that they are getting the authentic secrets of Albertus once more.

The startling views of natural phenomena laid open in Johnson's *Cornucopiæ*, Willsford's *Natures Secrets*, Jonstonus' *History* and other works, were not confined to England, or Germany, or any country in particular, but seem to have formed the general scientific creed of Europe. They appear, at all events, in the following little known production :

Historia y Magia Natural, o Ciencia de Filosofia Ocvlta, Con Nvevas Noticias de los mas profundos mysterios, y secretos del Vniverso visible, en que se trata de animales, pezes, aves, plantas, flores, yervas, metales, piedras, aguas, semillas, Parayso, montes, y Valles. Por el Padre Hernando Castrillo de la Compañia de Jesvs, natural de Cadiz. Donde Trata de los Secretos que perteneeen à las partes de la tierra. Con Lieneia.

En Madrid: Por Jvan Gareia Infanzon. Año 1692. Acosta de Franciseo Sazedon, Mereader de libros: Vendese en su casa en la calle de Atocha junto à la Santissima Trinidad frente de la casa de los Fueares.

It is divided into six books. Book I. treats of natural magic, the science of secret philosophy, of the most hidden mysteries of nature. It is a sort of cosmogony, and discusses everything from the shape of the universe to the sympathy and antipathy of things. There is a good deal about different kinds of magic; about the history of it from Adam down to its introduction into Spain; how it passed to the East; whether the Magi, the three holy Kings, were adepts in natural magic, or perverts to the diabolical variety. Similar fruitful questions are debated with much learning, and opinions are quoted

from many forgotten authorities. Book II. is devoted to the elements, and to the world and the countries thereof. Book III. in 30 chapters, discusses the whereabouts of the terrestrial paradise, the animals in it, the events which occurred in it, the tree of life, and the probability that Methusaleh, St. John, Enoch and Elias are dwellers there and are sustained by the fruit of the said tree. Book IV. takes up mountains; Book V. plains, valleys, forests, plants; and Book VI. concludes with metals and minerals, and precious stones. This is another treatise which discloses what passed for natural history a couple of centuries ago.

Another medical receipt book :

Secrets et Remedes Éprouvez. Dont les préparations ont été faites au Louvre, de l'Ordre du Roy, Par deffunt M. l'Abbé Rousseau, cy-devant Capucin & Medecin de Sa Majesté. Avec plusieurs Experiences nouvelles de Physique & de Medecine.

A Paris, chez Jean Jombert. . . . M.DC.XCVII.. . . .

This volume was edited by the author's brother, who has prefixed an introduction about him, and has described the origin of the Capucins of the Louvre.¹ The Secrets are pharmaceutical and include the preparation of several substances from plants, animals, and minerals. The subject is dealt with from the chemical side, but there appears to be nothing that is not to be found in contemporary treatises on the science, in which there is no affectation of secrecy.

The general conflict of opinions which arose and prevailed last century is visible even in the books of receipts. On one hand, some really valuable technical works were compiled, while on the other, the books of secrets retained, and even emphasised their character for imbecility. This will be apparent in the following specimens of each class :

An almost unknown book was written by T. Snow, and published under the fanciful title :

¹ A fuller and less flattering account of Rousseau and of his relations to his assistant, Aignan,—a curious story altogether—will be found in De La Marre's *Observations Critiques Sur un Livre du Sr Aignan, intitulé, L'Ancienne Medecine a la Mode*, . . . Paris, 1702. 12°, pp. [2] 208 [3].

Apopiroscopy: or, a Compleat and Faithful History of Experiments and Observations: Not only Chymical and Curious, but Mechanical; and in several Arts, Sciences and Professions. Being Pleasant, Useful and Profitable. Extracted from the most Authentick Writers, Manuscripts, and the Author's Experience. By T. Snow. London, Printed for D. Brown, at the Black-Swan and Bible without Temple-Barr, 1702.

It is in four parts. The first deals with experiments *mechanical*, including all kinds of building materials, the staining, colouring, inlaying, carving and gilding of wood, varnishing and lacquering. The second part treats of experiments *tericultural* (Snow is fond of out-of-the-way words), which relate to plants, to sowing, manuring, grafting, and such like. The third contains experiments *conservatical*, concerned with the preservation of plants, animals, food, &c., and the fourth experiments *ludicrous*, "which tend more to pleasure than profit, tho' some of them are not altogether wanting in the latter, neither." Here the author tells us about secret writing, juggling tricks, and so forth.

This is by no means a stupid book. The author was a sensible man, and was fully alive to the practical character of the work he had undertaken. In the introduction, or *Prolegomenon*, as he calls it, he expresses himself both soundly and liberally as to the importance of experiment and the inherent and indissoluble dependence—as is more apparent now—of technical applications on scientific investigation. The list of fifty-six authorities for his various receipts and secrets is an interesting one, and shows who were the leading men in practical matters at the beginning of last century.

Under the name of Aristotle, but not by him, there is a work entitled *Secreta Secretorum*, of which numerous editions appeared both before and after 1501, and which was translated into French, German and Italian. The English version was made by Robert Copland, and printed by him in 1528. The title is given by Herbert, from whom it is copied by Dibdin, who adds that there is a copy in the Public Library at Cambridge.¹ It is also mentioned by Watt and Lowndes. The book was printed again in 1702, in a small 16°:

Aristotles's Secret of Secrets contracted; being the Sum of his advice To Alexander the Great, about the Preservation of Health and Government. Formerly Tran-

¹ Herbert, *Typographical Antiquities*, London, 1785, I. p. 346; Dibdin, *Typographical Antiquities*, London, 1816, III. p. 114.

slated out of the original Greek into Latin, and divers other Languages; and being very scarce, is now faithfully rendred into English, For the Good of Mankind.

London, Printed for H. Walwyn, at the three Legs in the Poultry. 1702.

In the preface the bookseller states his wish to rescue the book from obscurity, because of its author and of its own worth that

. . . should have given this Discourse a place in the Volumes of the rest of the Author's Writings, which, . . . is not to be found, either there or in its Original Greek Language; being for a long time since . . . to be found only in a somewhat barbarous Latin Translation, or in an English Abstract, but sorrily translated into now obsolete Language. Which Abstract coming to the Hands of a real Lover of Mankind, who now gives it a Resurrection from its obscurity, did discover so much Excellency under all its blemishes, . . . that he could not be satisfied till he had with some Trouble and Charge got as near the Fountain as he could, viz. the Latin Edition of Paris 1520: the English printed at London 1572, he found to be out of Print, and that the Latin was not to be bought or seen (as far as he could find) any where but in the Bodleian Library at Oxford, and with one Gentleman in London, who was pleased to give him the perusal of it; by which he had not only the means to supply his Abstract, which was not compleat, but to see with how little Judgment the old English Grapho-Chymist had attempted to separate the Quintessence of Aristotle's Instructions to Alexander, leaving out some things very material, and putting in others not much to the purpose, and even missing the true sense of the Author in divers places. Whereupon he soon resolved with himself to make a new Translation and Abstract of this most excellent Counsel of the greatest Philosopher to the greatest King. . . .

This must, therefore, be a new translation; but to what extent it differs from the 1528 version, which, I suppose, is the sorry one in obsolete language, or from that of 1572, I am unable to say. There are no copies of these books in the British Museum, and as for the 1572 edition, I have seen no mention of it at all, anywhere, except in the passage above quoted. Judging by the references to the Latin (which I have likewise failed to see) made by Warton,¹ there can be no doubt that the translation of 1702 (so far as it represents the Latin at all) is a mere abstract. Except for the title, this 1702 book has no claim to a place in these lists; for it has nothing to do with technical art, and the wonderful legends, the secrets of nature, and other tit-bits, which appear to exist in the Latin, have been altogether omitted. It contains advice on the conduct of life, on counsellors, on physicians, on

¹ *History of English Poetry*, edited by R. Price, London, 1840. See Vol. I. p. cxlv.; p. clii.; p. 135, note x; Vol. II. pp. 230, 231.

moderation in eating, drinking, sleeping; in certain sections it recalls the insight into motives and men displayed in a better known and bitterly reviled work, the *Libro del Principe*. One can conceive that in some of its forms it may have been perused by Machiavelli, though for that matter the politic Italian was quite as able to instruct his princes as Aristotle was Alexander the Great.

The beginning of comprehensive and systematic technological works was made last century. The *Lexicon Technicum* of John Harris, 1704-1710, has been already noticed.*

In 1728, Ephraim Chambers followed with his compilation, which passed through several editions. Those I have seen are the following:—

Cyclopædia: or, an Universal Dictionary of Arts and Sciences; containing an Explication of the Terms, and an Account of the Things signified thereby, in the Several Arts, both Liberal and Mechanical; and the Several Sciences, Human and Divine: The Figures, Kinds, Properties, Productions, Preparations, and Uses of Things Natural and Artificial: The Rise, Progress, and State of Things Ecclesiastical, Civil, Military, and Commercial: with the several Systems, Sects, Opinions, &c. among Philosophers, Divines, Mathematicians, Physicians, Antiquaries, Critics, &c. The whole intended as a Course of antient and modern Learning. Extracted from the best Authors, Dictionaries, Journals, Memoirs, Transactions, Ephemerides, &c. in several Languages. . . . The Second Edition, corrected and amended; with some additions. . . .
London: . . . M.DCC. XXXVIII.

This is in two large folio volumes, illustrated with copper plates, and there is an elaborate frontispiece depicting the pursuit of the arts and sciences, engraved by J. Sturt. The plates are interesting, especially one of a first-class man-of-war of the beginning of last century, with the names of the different parts of it. The book itself is well done. It contains an elaborate preface on the classification of human knowledge. The individual articles are carefully selected and balanced, and if they are now no longer of practical value in the arts, they are very useful as illustrating the history of their progress and giving information on many subjects, the names of which are still employed, though their original application is forgotten.

The fourth edition corrected and amended was published in two volumes

* *Trans. Archæol. Soc. Glasgow*, 1883, Vol. II. p. 254.

at London in 1741, and to this was added in 1753 a "Supplement," edited by George Lewis Scott with the help of other writers. This also was in two folio volumes. Subsequently the Cyclopædia appeared "with the Supplement and Modern Improvements incorporated in one Alphabet." The editor was Abraham Rees, and the work was in four folio volumes, London, 1786-89. There were other editions which I have not seen.

In 1751-52 came Diderot and D'Alembert's huge work in 28 folio volumes, which unduly monopolised the name of Encyclopædia, for it was not the first. Then appeared the *Encyclopædia Britannica* for the first time in 1771, the successive editions of which bring us down to the present. It is the only one of them all which has retained its vitality and has represented the progress of universal knowledge for one hundred and ten years.

After Albertus Magnus had shown the way to compile Secrets, his name was used to confer a lustre and authority upon a collection and make it win its way, when all other names failed. Such a one was the following:

Der aus seiner Asche sich wieder schön verjüngende Phönix, Oder gantz neuer Albertus Magnus, Mit seinen curieusen Schrifften so wohl rare und unbekante Wunder und Geheimnisse der Natur, als auch vornehmlich Von Erzeugung der Menschen, erspriesslicher Fortpflanzung der Familien, wie auch andere vortreffliche Sachen, das Frauen-Zimmer betreffend, vorstellend. Aus vielen bewährten Authoribus mit grossem Fleiss zusammen getragen. Allen denen, so sich in dergleichen Materi geziemender Massen zu verhalten suchen, zum Nutzen und Unterricht wohlmeynend mitgetheilet von Casparo Nigrino M. Zuletzt ist der Hebammen-Catechismus beygefüget.

Hamburg, bey Joh. Georg Hermessen, 1729.

In keeping with its title, opinions and notions are transferred bodily from Albertus Magnus and from Michael Scotus without any criticism or a note of warning that they are five hundred years old, but for the larger part of the book Nigrinus himself must bear the responsibility. The burden is not a light one, for he has entered with great minuteness of detail into the whole subject, and has ventured on the description of some recondite phenomena with a confidence which could hardly be assumed at the present day, even with great increase of knowledge. But, although the book could form nothing now but a solitary item in the bibliography of biology and obstetrics, it contains a stratum of unintentional humour which makes it not absolutely unremunerative to dig in.

A small handbook, translated from the German and published at London in 1739, was: *The Laboratory or School of Arts*, containing curiosities relating to gold and silver; secrets for jewellers; experiments for making casts in metal, wax, and other materials; glass-making; secrets for the use of cutlers, joiners, japanners, bookbinders, and other handicraftsmen, and some other experiments. It has illustrations of various pieces of apparatus, and is a good practical collection, though old-fashioned.

In the face of the sounder knowledge and greater experimental skill exhibited in some of the books just mentioned, there were others still produced based on the old superstitions and fanciful notions. An instance is afforded by the work of Joannes Jacobus de Maldiny, entitled *Mirabilia Mundi sive de Scientiarum Artiumque omnium origine et Progressu Tractatus*, which was published at Augsburg in 1754, and was dedicated to King George I. From the title one should have expected a history of the arts and sciences, but there is nothing of this kind, and instead we have a collection of very superficial and usually inaccurate statements, inaccurate even for the time, about physics, natural history—plants, animals, and minerals—and chemistry. But what could be looked for from a writer contemporary with Pott and Marggraf and Macquer, who bases his chemistry on Arnold of Villanova's?

A little better is another work:

Physica Exotica, Seu Arcana Naturæ, et Artis. Continens Selecta, curiosa, jucunda, & omni ferè hominum statui utilissima. In Eorum Gratiam Denuo Edita Qui Amæna æquè ac Prodigiosa Ejusdem Utilitate delectantur.
Cassoviæ, Typis Collegii Academici Soc. Jesu, A. 1767.

This I have not seen mentioned by any authority whatever. It contains at the end a tetraglott vocabulary of natural history terms, Latin, Hungarian, German, and Bohemian. It deals with secret writing, secret effects of colours, agriculture, liquors, metals, surgery, cattle, insects, removal of stains from clothes; the selection of secrets, therefore, is catholic, but they are all empirical, and many of them have been concocted by persons ignorant of the nature of the substances dealt with.

Another collection, once more under the shadow of the great name, but differing from all the preceding, appeared in 1768:

L'Albert Moderne, ou Nouveaux Secrets éprouvés, et licites, Recueillis d'après les Découvertes les plus récentes. Les uns ayant pour objet de remédier à un grand

nombre d'accidens qui intéressent la santé: Les autres, quantité de choses utiles à sçavoir pour les différens besoins de la vie: D'autres, enfin tout ce qui concerne le pur agrément, tant aux Champs qu' à la Ville. Le tout divisé en trois parties, & rangé par ordre alphabétique.

A Paris. . . . M.DCC.LXVIII.

A new book appealed to the people: so that the second edition, *Augmentée de plusieurs Secrets nouveaux*, followed in 1769, and a reprint of it at Basle in 1770.

The compiler explains that he has named his book out of opposition to the old Secrets of Albertus Magnus and of Albertus Parvus; he criticises these older collections, and points out that his collection is respectable; and free from superstition and sham magic. This *Modern Albert* is more rational, and the author has furnished as sound information as he well could. The first section contains medical secrets; the second various useful receipts; the third describes the preparation of "pleasurable things:"—liqueurs, flowers, painting, and colours. The alphabetical order is interesting as it is one of the first books of secrets arranged in this way; generally there is no arrangement at all.

The same method was followed in another French work of much more thorough character than any of the jumbles of empirical receipts. I refer to the work of Abbé Jaubert:

Dictionnaire Raisonné Universel des Arts et Metiers, contenant l' Histoire, la Description, la Police des Fabriques et Manufactures de France & des Pays Etrangers: Ouvrage Utile à tous les Citoyens. Nouvelle édition, corrigée & considérablement augmentée d'après les Mémoires & les Procédés des Artistes; revue & mise en ordre par M. l'Abbé Jaubert, . . .

Paris. . . . M.DCC.LXXIII.

This dictionary is in five small octavo volumes, and contains a great deal about the practical arts, arranged in tolerably comprehensive monographs. The author has stuck closely to his subject, for he does not include in the dictionary an article on Chemistry, which was evidently considered too speculative for the scope of the work.

Just about the end of the century the character of the collections degenerates so sadly, that I have hesitated to include those which I have seen, but as they have been in circulation at some time or other, they may be mentioned briefly. One is entitled, *Combinaisons Égyptiennes, ou Recueil de Morceaux*

Choisis. It is the fifth edition, "corrected and enlarged," and it was published at Paris, by Hügelet, in the year VIII. It contains secrets from both the *grand* and *petit Albert*, interpretation of dreams, a string of lottery secrets, and a fardel of other curiosities. It is hard to say what is worst in this despicable specimen, the paper and print, or the illustrations, which must have been done by a school-boy with no talent for drawing, or the contents. All are worthy of the place and of the year VIII. ; but what was the "goddess of reason" about to tolerate five editions of such a gallimaufry?

A tract in English is somewhat more creditable ; but the title is ludicrous, considering the contents: *The Fountain of Knowledge or British Legacy, containing among upwards of Two hundred other Curious Particulars of the Utmost Service to Families in General. The Indian Way of Marking on Silk, Linen, Woolen, &c.* . . . and a catalogue of other secrets, medical, chemical, technical. This book contains secrets that I have not noticed in any of the other collections ; for instance, how to breed game cocks, "with a choice and valuable secret for feeding a cock four days before fighting, communicated by a noble lord." This pamphlet, for it is nothing more, was printed at London, by Bailey, in Leadenhall-street. There is no date, but it apparently belongs to the close of last century.

The name of Albertus, the name to conjure with, was again dragged into service by Eberhard Heinrich Fischer :

Albertus Magnus der Andere. Das ist : Geheimnisse der Natur und Kunst vor alle Stände, als für Künstler, Jäger, Oekonomen, Professionisten, Handwerker &c. zum Besten aus eignen Erfahrungen aufgesetzt und mit nöthigen Registern herausgegeben. In zweyen Theilen.

Altona und Leipzig, bey Johann Heinrich Kaven, 1797.

The contents of this work are in general of the least useful kind. They consist largely of juggling tricks, and perfectly purposeless practical jokes ; the secrets which one knows to be correct, are described in the most empirical and superficial way, and many secrets are just nonsense.

It is an excellent trial to one's patience, the perusal of this volume. One feels at a loss to say whether the author was intellectually weak, or whether the book was itself a practical joke, but I fear it must be accepted as the *bona fide* belief of an earnest though credulous and ignorant compiler, far more credulous than even the earlier writers. For the author of the *De Secretis*

Mulierum, or *De Mirabilibus Mundi*, whether Albertus Magnus or not, there may be framed an excuse, but for authors last century like Maldiny and Fischer and others, there is apparently none possible, except that the sceptical era of Voltaire was also densely ignorant and superstitious. The eighteenth century was far too fond of boasting of its enlightenment, whereas it was so ignorant that it hardly knew what scepticism means.

Some of the secrets revealed by Lovel and others are wonderful enough, but when one reads an account, quoted by Fischer without a word of protest, of a lamp with an incombustible wick, fed by oil of human blood (whatever that might be), burning as long as the person lives, from whom the blood-oil has been procured, and then going out—"Hui!"—when he dies, one's breath feels taken away.¹ Lavoisier had lived, and though the "goddess of reason" having no need of philosophers had guillotined him, what he had discovered about combustion was not destroyed or lost; but only ninety years ago such statements as those of Fischer's were possible in Europe—and Europe was proud of itself.

In the present century, thanks to a better comprehension of science and its applications, books of secrets of all kinds have become almost extinct; and if any linger on they are mere reprints of old collections. Those of Lupton and Cortes have been referred to above, but there are two or three others still to mention. Johann H. M. von Poppe, the author of the *Geschichte der Technologie*, was a most prolific compiler of technological books. They belong, for the most part, to the modern literature of the subject; but there is one which may be put on the list:

Neuer Wunder-Schauplatz der Künste und interessantesten Erscheinungen im Gebiete der Magie, Alchymie, Chemie, Physik, Geheimnisse und Kräfte der Natur, Magnetismus, Sympathie und verwandte Wissenschaften. . . .
Stuttgart: J. Scheible's Buchhandlung. 1839.

This is a collection of treatises by Martius, Wiegleb and Rosenthal, Philadelphia, Pinetti and Von Eckartshausen. It is in six small octavo

¹ This is a relic of the belief in sympathy. An account of the preparation of the wonderful oil and of its use in "The Lamp of Life" will be found in Christopher Irvine's *Medicina Magnetica*, [Edinburgh,] 1656, p. 98. One hundred and forty years later, Fischer makes it all public again, as if it were worth knowing.

volumes, full of all kinds of so-called natural magic ; that is, curious and unexpected effects from natural causes and properties of matter, conjuring, sleight of hand ; various kinds of receipts, colours, inks, and other things which it would take pages to enumerate. The only question is, whom could this compilation have attracted as reader or student in 1839, and could it secure a public now ?

A modern collection, or possibly a reprint of the same period, though with the spurious date 1725, is the *Sammlung der grössten Geheimnisse ausserordentlicher Menschen in alter Zeit*. This is a set of two and twenty awe-inspiring tracts on the blackest of magic, discovery of buried treasure, and other forbidden arts. It contains conjurations, couched in terms so appalling, that the wonder is the demons so invoked did not flee to the remotest confines of their territory to be out of the hearing of such bad language, rather than take any notice of the users of it. There are portraits of the demons, which are creditable to the woodcutter's imagination, though hardly to his skill.

In the first part of these notes I merely mentioned the secrets of "little Albert," of which I had a copy of the French translation, printed at Lyons in 1743. Since then I have got a copy printed at Lyons in 1729, uniform with the secrets of Albertus Magnus of the same date, and another, Lyons 1803, uniform with the Albertus Magnus of "6518." The earlier one is well printed, and the illustrations passable ; the 1803 edition is woful.

In reading this work, what strikes one is the uselessness of most of the receipts, or the unattainable aims proposed, or the seeming futility of the means recommended, or the impossibility of getting the requisite materials, or of mixing or using them under the proper conditions. It contains, however, one famous receipt : how to make the "hand of glory," which, according to Dousterswivel, is "a vary great and terrible secrets." And there is a picture of the hand, too.

This work is not only quite worthless, but is humiliating ; still, last autumn, it suddenly leapt into a two-days' notoriety, because it appears that its receipts are believed in at this moment and are put in practice. According to a letter in the *Times* of August, 7, 1884, extracted in the *Globe* of the same date, and commented on in a leading article in the *Daily Telegraph* of the following

day, Albertus Parvus and his "weird little volume" are in full blast among the witchmongers of the Mauritius. The story, as told, reveals an amount of criminal superstition in that island which is hardly credible—if it were not in the *Times*—and the tone of the *Telegraph* leader abundantly proves that the author thereof was unacquainted with the absurdities, the immoral absurdities, of that wretched fabrication, else he would never have spoken of it as "this unholy tome," in the sort of bated breath style he has affected. For *Alberti Parvi libellus* is not only nonsense, but nonsense that merits the prefixing of any emphatic adjective, however short, that the reader cares to employ.

Under these same old names chap-books circulate in France, but they differ essentially from the originals. They are to be had separately, but they are also issued together under the following general heading :

- La Grande et Véritable Science Cabalistique ou La Sorcellerie Dévoilée Contenant
 1° *Le Grand Albert*, ses merveilleux *secrets*, sa vie et ses travaux scientifiques ;
 2° Les secrets mystiques de la magie naturelle du *Petit Albert* ;
 3° *Le Dragon Rouge* ou l'art de conjurer les esprits infernaux, de les vaincre et de les soumettre à sa volonté.

Ouvrage composé après des recherches nombreuses sur les plus anciens et les plus nouveaux documents de la Science.

Paris: Le Bailly, Libraire, Rue de l'Abbaye-Saint-Germain-des-Prés, 2 bis. No date. (1830 ?).

12mo. *Le Grand Albert*, pp. 107 [1]. Frontispiece (bis) and woodcuts, such vile things! *Le Petit Albert*, Frontispiece: L'Alchimiste. pp. 5—108, and another picture before part 2. *Le Dragon Rouge*, Frontispiece: Raising a spirit. pp. 5—108.

This volume is published with the best intentions. One aim is to free the memory of Albertus Magnus from the imputation of having been a sorcerer [save the mark!], and to provide the intelligent reader with an antidote: "Nous mettrons," says the editor, "ainsi entre les mains du lecteur intelligent un préservatif contre les formulaires de magie qui se glissent encore dans les campagnes et aussi contre les gens qui exploitent la crédulité publique en essayant d'utiliser, au détriment de la bourse de leurs compatriotes, la science de mauvais aloi qu'ils puisent dans ces recueils."

There is a brief résumé of Albertus's life, partly historical, partly legendary ;

a few of his reputed magical secrets with pictures [such pictures!] of evil spirits,[†] magic circles, and cabalistic characters; a physiognomy, and, lastly, a collection of quite modern receipts, &c., entitled the "true treasures of Albert the Great." Among these are such plebeian commonplaces as how to choose a good milch-cow; what to do if you are bitten by an animal; receipts against drunkenness; for the treatment of drowned people; to make waterproof cloth, and the like.

Of the second tract only a few sections are taken from the old one of the same name; the rest is quite modern, and is reasonable. The editor has but a low opinion of the Petit Albert, for in his prefatory note he says:

"Si nous donnons quelques recettes excentriques, nous avons un double but: d'abord, amuser le lecteur qui rira de toutes ces inepties dont les prétendus sorciers des siècles d'ignorance se servaient pour abuser les sots qui avaient recours à leur grimoire; ensuite, pour essayer de démontrer combien il était difficile de se procurer les ingrédients nécessaires à ces expériences magiques, partant l'absolue impossibilité de les expérimenter."

The *Dragon Rouge* is a narrative of ghost and incantation scenes, with an exposé of the tricks by which they were produced, and a few hints about apparent magic executed by physical and chemical means. The intention is to divert the minds of the French peasants from superstitious terrors, and to turn them to sensible pursuits. It is a laudable, if a required object, but it seems a curious way of attaining it.

It may be remarked that these books are got up in the very cheapest and commonest form, and, except as colporteurs' books for the populace, have no interest or attraction.

Not to be confounded with *Le Dragon Rouge* is *Le Livre Rouge* by a person calling himself Hortensius Flamel. It is also a chap collection, published at Paris in 1841. It contains brief notices of the chief magicians, so-called; chapters on gold-making, a chronology of the principal adepts, the influences of the stars, secrets from Albertus Magnus, from the book of Cleopatra, Pliny and others. In the preface, the author professes himself wroth with the shameless books that pass under the name of the great and little Albert, and

[†] The best portraits of demons that I know of will be found in *The Magus* by Francis Barrett, London, 1801, 4to; coloured miniatures, I presume from life.

states that it is only after the study of the mighty sages of antiquity that he has ventured to write his book. So, besides transferring sections entire from Albertus Parvus he quotes, among other things from the aforesaid sages, how to drive away ants, how to cure the toothache, how to make a woman beautiful for ever, how to take a long walk without being tired, how to make oneself invisible, how to know the future, and to appear after death. And yet the author has the effrontery to speak of the "misérables rapsodies" of the two Alberts.

A parallel book on divination, *Le Livre d'Or*, by the same writer was published at Paris in 1842. There is a short historical introduction, but the bulk of the work is devoted to chiromancy.

350 entschleierte Geheimnisse aus dem Nachlasse der berühmten Chemiker, Oeconomen und Sympathiseur's Daniel Groos, Andreas Schulze und Nathusius Krumm, is the beginning of the title of a small chap-book printed at Heilbronn, about forty years ago. It was edited by a Heinrich Theodor Zimmerman, who thought fit to invert his name and call himself Namremmiz, which looks very impressive and mysterious at small cost. The receipts—there are 407 of them—are very miscellaneous: medical, veterinary, artistic, technical, etc., etc. They have, however, all a practical end in view, and though empirical, and in some cases questionable, yet as there is nothing essentially absurd in them, the book may be allowed to pass.

I conclude with the following addition to the works about glass :

Curiosities of Glass Making : with details of the processes and productions of ancient and modern ornamental glass manufacture. By Apsley Pellatt.

London : David Bogue, . . . MDCCCXLIX.

It forms a small 4to, and it contains wood cuts of operations and tools, and coloured illustrations of ancient and modern glass. The subject is treated of historically as well as technically.

[*December 19th, 1887.* With some generalities on the books now enumerated, I had originally designed to wind up this series of notes. These, however, I shall delay, for a few books which have come to my knowledge are so well entitled to recognition that a description of them is unavoidable. This I hope to communicate to the Society at the earliest possible opportunity.]

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART V

BY

JOHN FERGUSON, LL.D.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archaeological Society of Glasgow, January 19, 1888]

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET
1889

T. III

L. xv

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART V

BY

JOHN FERGUSON, LL.D.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archeological Society of Glasgow, January 19, 1888]

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET
1889

(100 Copies Reprinted.)

BIBLIOGRAPHICAL NOTES ON HISTORIES OF
INVENTIONS AND BOOKS OF SECRETS.

PART V.

BY

JOHN FERGUSON, LL.D.,

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

[*Read at a Meeting of the Society held on January 19th, 1888.*]

RARE as are most of the books included in the foregoing parts, they are altogether surpassed in this respect by some which I have met with since my last paper was read to the Society. On these I shall now make some observations before taking leave of the subject.

Several copies of Polydore Vergil's history of inventions which I have inspected might be enumerated, but, in particular, I must refer to one of an edition of the first three books, printed at Paris by Guillaume Le Rouge for Denis Roce in 1513, in small quarto. This has hitherto escaped the notice of all the bibliographers, nor is there a copy in the British Museum, Bodleian, or any other library, to the catalogue of which I have had access. There is also the folio edition printed by Froben at Basel in 1521,* which is the

* From the list in *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 233, there has been omitted an *octavo* edition, printed at Basel in 1521. It is mentioned by Beckmann, but I have not seen it, and I am very doubtful as to its existence.

first that contains the whole eight books. It is also the first that contains the long introductory letter, written by Vergil from London to his brother, which appeared again only in the 1528-29 edition of Stephanus.* There is the folio reprint by Froben in 1525, without this letter, but with a shorter one prefixed to the fourth book, which superseded the other in all subsequent editions which I have seen. Then there is the octavo edition of 1532, printed by Bebelius at Basel, the first of the popular issues. Of the translations may be mentioned that into Italian by Baldelli, reprinted in quarto at Brescia in 1680. This translation was published at Florence, in 1587; it is distinct from that by Pietro Lauro which appeared at Venice in 1543, and again in 1550.† The mere mention, however, of all these editions must now suffice, as details about them and several others have been already communicated by me to the Society of Antiquaries in a separate paper on Polydore Vergil.‡

Among the histories one of the less common is the list of inventions in the *Dilettevole Giardino* of Contarino. In connection with Beckmann's catalogue of histories, I had the opportunity§ of mentioning a comparatively early edition of the book, of which the title may now be given.

Il Vago, E | Dilettevole | Giardino, Ove | Si Leggono | Gli infelici fini de molti
 huomini Illustri. | . . . | Raccolto dal Padre Luigi Contarino Crucifero.
 | Con licenza de' Superiori. | Di Novo Ristampato, Et Ampliato. |
 In Vicenza, Per gli Heredi di Perin Libraro. 1589. |

This is a common Italian quarto of the sixteenth century, printed in italics on inferior paper, and is of no bibliographical interest; a book in every way resembling the Italian translation of the *Margarita Philosophica*, described below. Since then I have examined the fifth edition, which is also in quarto, and was printed in the same style as the other. The title is as follows :

* *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 238.

† *Ibid.*

‡ Read June 19, 1887, and printed in the *Archæologia*, vol. LI. That paper carries out the intention I formerly expressed (*Trans. Archæol. Soc. Glasgow*, 1886, I. p. 199) of describing all the English editions of Vergil's history of inventions; and, besides, it supplements what I have said about Vergil in previous parts of these *Notes*.

§ *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 231.

Il vago, & diletteuole | Giardino | Ove Si Leggono | Gli infelici fini di molti
Huomini Illustri. | . . . | Raccolto dal R. Padre Luigi Contarino
Crocifero. | Et in questa quinta editione accresciuto di noua aggiunta, | &
con diligenza emendato. |

In Vicenza, Per Gio. Pietro Gioannini. MDCVII. |
Con Licenza De' Ssuperiori. |

This edition is in two parts: the first is simply a reprint of the earlier work, but in the second, Contarino has given a great many other memorable examples of the casualties in human history. This second part has a separate title page :

Aggvinata | Al vago, & diletteuole | Giardino | Del R. P. Lvigi Contarini
Crocifero, | Dall' istesso nuouamente composta. | |
In Vicenza, Per Gio. Pietro Gioannini. MDCVII. | . . .

and in it there is a long catalogue of the headings under which the author has grouped his instances, just as is done in the title-page of the first part. It is not requisite to quote these, for though they all are very instructive, none of them has any bearing on the history of the sciences or arts. From the general title of the whole work one would infer that the appendix was first incorporated with the fifth edition, but this would be wrong, for, prefixed to the appendix, is a dedication to Tomaso Contarini, which is dated September 23, 1589, and is signed by the heirs of Perin, bookseller, so that this appendix must be as old as the edition of 1589. There is no indication, however, of any such supplement forming an integral part of that edition, unless the copy just quoted is defective; but it is quite possible that, although the appendix was compiled by the author at that time, it was not printed for some years later. Here once more, comparison of the first edition with those which came after it is the only method of ascertaining when the addition was made. It will be observed that, in the title of the appendix, the author's name is spelled *Contarini*, and not *Contarino*, as in the first title.

This is an interesting work to dip into, provided one is not in a too critical mood, for a disposition to question any of the recorded statements would have the effect of dissolving the charm. The same care of course is requisite in the perusal or consultation of most of the books that have been mentioned in the course of these researches. They must be accepted as facts in the

history of knowledge and literature, and must be judged, not by critical canons possibly applicable to present books, but by generalizations of history bearing upon the culture of the time of their production. From that point of view they are invaluable and indispensable, for from them alone—the books, which the number of editions they have passed through proves were most widely read—can be learned what were the knowledge, belief, science and critical power of their authors.

Contarino, the author of this comprehensive commonplace book, which displays wide reading, was a Venetian noble, who studied at Padua, entered the congregation of the *Crociferi*, and had a great reputation for his knowledge of history, poetry, and literature. Suffering from phthisis, he went to Naples for change of air, but ultimately succumbed there to the disease in 1650, in the forty-eighth year of his age. He edited the works of his father, Gaspar Contarino, and, besides the *Giardino*, wrote books on the origin of Naples, the antiquity of Rome, and other subjects.*

A remarkable contribution to the history of discovery was made in a volume published in 1684, entitled *Inventa Nov-Antiqua*. The author, Theodor Jansson van Almelveen, was born at Mydregt, near Utrecht, July 24, 1657. At the University of Utrecht he studied ancient literature, philosophy, and theology under Grævius, de Vries, and Leusden, and medicine under Munniks and Jacob Vallan. He went through the whole round of knowledge and became doctor of medicine at Utrecht in 1681. He settled at Gouda in 1687, and founded a learned society there in 1692. In 1697 he was appointed professor of History and Greek at Harderwyk, and subsequently in 1702 he became also professor of medicine. He died July 28, 1712.† He was an indefatigable author and editor, and acquired the highest reputation as a

* Jöcher, *Allgemeines Gelehrten-Lexicon*, Leipzig, 1750, I. col. 2073. Graf Henckel von Donnersmarck (Ersch and Gruber's *Allgemeine Encyclopädie*, Leipzig, 1829, Sect. I., Th. xix., p. 200) says his *uncle* Gaspar. The *Giardino* is not mentioned in this article.

† Chaussier and Adelon (*Biographie Universelle*, Paris, 1843, I. p. 508) say he died at Amsterdam, leaving his manuscripts to a friend and his collection of Quintilians to the University of Utrecht. But Jöcher (*Allgemeines Gelehrten-Lexicon*, Leipzig, 1750, I. cols. 288-9) says he died at Harderwyk, which I suspect is the more correct statement of the two. Compare Kestner, *Medicinisches Gelehrten-Lexicon*, Jena, 1740, pp. 28-29.

teacher, and for his scholarship, science, and particularly for his great bibliographical knowledge. For this specialty, it has been suggested, he may have been indebted to the opportunities of observation afforded him by his uncle Jansson, the printer, whose name he bore. A list of his writings is given by Eloy and others.* What entitles him chiefly to mention here is the work already cited, together with a brief dictionary of discoveries. As these are not at all common, they may be described in full.

Theodori Janssonii ab Almeloveen *Inventa Nov-Antiqua*. Id est brevis Enarratio Ortus & Progressus Artis Medicæ; ac præcipue de Inventis vulgo novis, aut nuperrime in ea repertis. Subjicitur ejusdem Rerum Inventarum Onomasticon. Ad Virum Clarissimum Iacobum Vallan
Amstelædami, Apud Janssonio-Waesbergios. M. D. C. LXXXIV.

This forms a small 8vo volume of 32 preliminary pages, containing an engraved and a printed title, preface to the reader, congratulatory verses and list of authors cited, 249 pages of text and 7 of index.

The *Onomasticon* has a separate title :

Theodori Janssonii Ab Almeloveen *Rerum Inventarum Onomasticon*.
Amstelædami, Apud Janssonio-Waesbergios. M. D. C. LXXXIV.

and it has also separate signatures and pagination.

In the *Inventa Nov-Antiqua* the author discusses, with profuse learning and with a strong bias towards antiquity, the question how far the discoveries in medicine of the moderns were anticipated by the ancient physicians. In this special department, therefore, he sustains the thesis which was subsequently taken up by Dutens and which, in its greatest amplitude, led to the serious debates of Temple and Wotton,† and to the satirical *Battle of the Books*. In the case of medicine, however, this thesis cannot be assented to even as regards the seventeenth century, except to a very limited extent. The ancients may have observed certain facts which were forgotten in the middle ages, or they may have guessed at or inferred certain things as possible, but they could not have demonstrated them with even such accuracy as was possible two centuries ago, for scientific method was

* Eloy, *Dictionnaire Historique de la Médecine*, Liège, 1755, I. p. 49. *Nouvelle Biographie Générale*, Paris, 1859, II. cols. 190-191.

† *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 244.

not sufficiently developed to admit of it. Nevertheless, the work of Almeloveen must be regarded as important for the progress of the discussion. It brought out what could be said in favour of the ancients, but it showed also that their influence was distinctly on the wane, when men had to be convinced of its existence by actual demonstration.

The vocabulary of discovery which follows the main treatise is worth notice. In the address to the reader the author describes how, when his treatise on new-antique inventions was drawing to an end, he was at a loss whether he should publish separately, or append to it, the vocabulary he had arranged. By the advice of his friends he added it to the other book. Then he compares his work with those of others who have written professed histories of discovery, as for example, Matthæus, Sabellicus, Polydorus Vergilius, Sardus, Ravisius Textor, Gilbertus Cognatus, all of whom have been already before us. He says that some have been too diffuse, others confused, some have omitted the inventions, others the authorities and evidences, while others have followed no definite order, so that it is not easy to find either the place or time of what one seeks. On these predecessors he has endeavoured to improve by arranging the matter alphabetically, by giving the name of the inventor and the authority or authorities for his statements. The *Onomasticon* is of course a brief enumeration of facts, a bare list of the most striking discoveries that were known to the ancients and the beginning of which was ascribed by them to famous, sometimes mythical personages, and it is but seldom that more than two or three lines are given under each heading. One naturally compares it with the lists of Pastregicus, Contarino, Textor, and others, to which it is superior, especially in exact references to the authorities. Many, if not all, of these might now require revision and correction, but it was a step in advance to have compiled such a vocabulary at all, and to have given chapter and verse for the various statements. Contarino, for example, gives no authorities, and though Pastregicus gives these, he omits references to the particular passages quoted. The last named author follows the alphabetical order of the inventors' names, whereas Almeloveen follows the alphabetical order of the names of the inventions. One, therefore, is a convenient counterpart to the other.

Another similar history, *Schediasma de curiosis hujus seculi inventis*,

was published at Kiel in 1695 in a small 8vo volume, pp. [16] 342. It contains sections on new inventions and how they stand related to old knowledge, on studies, on the Cartesian system, on morals, on discoveries in medicine, mathematics, physics and mechanics. There is a copy of this first edition as well as of that which followed, in the British Museum. The author, George Pasch or Paschius,* was the son of a merchant and was born at Danzig, September 23, 1661. After finishing his schooling there and displaying great talent as a disputant, he went to the Universities of Rostock, Wittenberg, where he studied theology and took his degree in 1684, then to Leipzig, Halle, Jena and Erfurt, and on his return to Wittenberg became "assessor" of the Faculty of Philosophy in 1686. Then he started upon a learned tour to the different Universities, in order to make the acquaintance of the scholars of his time, and to study theology and other subjects. He travelled through Germany, Bohemia, Poland, Denmark, Holland and Belgium, France and England, visiting Oxford and Cambridge. On his return he received at Kiel the professorship of Moral Philosophy. In 1689 he married; in 1701 he was appointed also professor of Logic and Metaphysics. In 1706 he became extra-ordinary professor of Theology and resigned the Moral Philosophy chair. He had been for some years in feeble health when he died suddenly while at dinner (*cum mensæ prandens assideret*) on September 30th, 1707, aged 46 years and one week.

Paschius was a skilled theologian and a man of wide interests and varied culture. He lectured on all the branches of philosophy, and was able to give instruction in English and in Polish, which latter language he had acquired in a few months when a school boy. His professorial lectures were distinguished by their clearness and thoroughness. He was the author of a number of academic dissertations on philosophical subjects, most of which were published.† One of the most important of his books is the present one on the history and progress of the sciences, and in it are displayed not only very

* There are numerous notices of Paschius. The most accessible are those by Johann Moller, *Cimbria Literata*, Havniæ, 1744, II. p. 610, and by Henrich Döring in Ersch and Gruber's *Allgemeine Encyclopädie*, Leipzig, 1840, Sect. III. Th. xiii. p. 1. Other references are given by these writers.

† A list both of his published and unpublished writings is given by Moller.

extensive learning and varied knowledge, but critical skill as well. The work is a review of contemporary philosophy, science, medicine and literature, and it proves that Paschius was not only a man of indomitable perseverance, but of great attainments to enable him to arrange and classify the material he had collected and to compare the progress of modern discovery with ancient inventions and anticipations. The work is written with lucidity, and fully bears out what is said of his power as an able lecturer and successful teacher.

The first edition forms a small 8vo volume; it was well received and favourably noticed.* It did not satisfy the author, however, for he went on adding to it, so that when a new edition was called for, he was able to produce a much enlarged account of the subject. The second edition was published at Leipzig, five years later, and it is this which I have examined more minutely. The title is as follows:—

Georgii Paschii, . . . De Novis Inventis, Quorum Accuratori Cultui Facem Prætulit Antiquitas, Tractatus, Secundum ductum Disciplinarum, Facultatum atque Artium in gratiam Curiosi Lectoris concinnatus. Editio Secunda, Priori quarta parte auctior. Additi sunt Indices I. Auctorum, quorum scripta, dicta & facta recensentur, illustrantur, laudantur vel castigantur. II, Rerum maxime memorabilium.

Lipsiæ, Sumptibus Hæredum Joh. GrossI. MDCC.

This forms a respectable quarto volume, containing three times as much matter as the previous edition, and it is even now a useful work for the history of the arts and sciences; in the physical and medical sections particularly being full of interesting notices of the discoveries of the seventeenth century. While, therefore, its main end is to allocate to the ancients all the credit they deserve, or can claim, for the advances they made and their anticipations of more recent discoveries and inventions, yet, as these quite modern discoveries have also to be described very fully in order that the relationship may be exhibited, Paschius' book to some extent plays the part which an annual report, or a year-book of inventions does at the present day. So far as I know

* A description of the contents will be found in the *Acta Eruditorum* for August, 1696, pp. 390-2, and in other periodicals as well, for which Moller may be consulted. Nicéron (*Memoires*, VII. p. 270) in his list of Paschius' works, gives a flattering account of the *Schediasma*.

there was no edition subsequent to the present one, and both editions of the book have now become rare. It is not included by Beckmann in his list of histories,* though he quotes it elsewhere, and it has been passed over by Graesse.

From what has just been said it will be seen that Paschius was a follower of Almeloveen. Indeed he adopts the very title of his book, *Inventa Novi-Antiqua*, and, in his review of writers of history, duly admits† that Almeloveen had already forestalled his design—so far at least as medicine was concerned—of assigning to the ancients everything of alleged modern discovery that they can be said to have anticipated. But Paschius has worked on a much wider plan and has included many topics in addition to medicine, besides entering into a fuller account of them. The comparison, however, of the discoveries of the ancients with those of the moderns, merely for the praise of one at the expense of the other, is not satisfactory; the only real practical outcome of such discussions is the arrival at a more accurate knowledge of antiquities and of the history of scientific discovery by the collecting and sifting of evidence, apart from the respective glory or merit of the workers in different ages and under so very different conditions. Both Almeloveen and Paschius, however, did excellent work for the history of discovery though their main aim no longer interests the modern historian.

A *Dictionnaire des Inventions, des Origines et des Découvertes*, by Noël, Carpentier and Puissant, already in its fourth edition, came out at Brussels, in 1838. This work is comprehensive, and the articles, though brief, are fairly well executed. It is, however, fifty years old and it contains much which, though new then, has been completely superseded, and statements by authorities, the best of their time, whose very names are now all but forgotten. This, however, is the fate of most human effort, and it can be pondered as one of the lessons of history.

Five more copies of the two sets of secrets attributed to Albertus Magnus have come into my hands, all of them of importance.

The oldest, as far as I can judge, is of an unknown edition of the *Liber*

* *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 231.

† *De Novis Inventis*, Lipsiæ, 1700. Præfatio ad Lectorem, sig. b 3.

Aggregationis. There is nothing at all resembling it in the descriptions of Panzer, Hain, Graesse and Brunet, so that the following may fill a blank in the catalogue of fifteenth century books.

F. 1a, with signature a1, begins :

Liber aggregationis seu liber secretorum alberti | magni de uirtutibus herbarum lapidum et anima | lium quorundaꝫ Liber primus de uiribus quarundam herbarum. |
Icut uult p̄hs in pluribus locis Omnif | scientia de genere bonorum est :
Verun | tñ enim operatio aliquādo bōa aliquādo | mala prout scientia mutatur ad bonum et ad malum | lum finem ad quem operatur : &c.

F. 17b, l. 16 :

Expliciunt Secreta aliqua alberti magni d Colonia fu | per naturis: uirtutibus. 7
efficacia herbarū : lapidum | 7 animalium quorundam. |

F. 20b begins :

E I V S D E M A L B E R T I M A G N I .
D E M I R A B I L I B V S M V N D I F E
L I C I T E R I N C I P I T .

O S T Q V A M S C I V I M
V S Q V O D O P V S S A P I
E N T I S E S T F A C E R E
C E S S A R E M I R A B I L I A

rerum que apparent in conspectu hominum q̄uis
uaria : &c.

F. 42a, l. 23 :

Albertus Magnus . De.
Secretis nature . Explicit.

F. 42b :

t autem qui legeris q̄ supius notata sūt
u uberiorem fructum capias . uolumus cōeꝫ
 regulam et breuem tradere ad sciendum (*sic*)
ortum Lune secundum epactam : cui applicabimus
perpetuā rationē p̄fice &c.

F. 43b, l. 25 :

Et Sic Est Finis.

This is a small 4to; printing $5\frac{1}{16} \times 3\frac{1}{16}$; signatures **a** to **f**₄ in eights, except **a**, which is in seven, or ff.43 in all. There are 27 lines to the page. There are catchwords on the last page of each sheet, except sheet **b**. The type is semi-gothic, and there are comparatively few contractions, but the capitals are some-

what ornate, especially M, I and F.* There is no place, printer's name or date, but it looks as if it might have been printed about 1470, or very shortly after, in Germany. In this particular copy signatures \mathfrak{D} ij and \mathfrak{D} vij (the corresponding leaves of the sheet) are supplied in manuscript contemporary with the book, and there are numerous manuscript notes of the same period on the margin. The most striking anomaly in the book consists in sheet **a** containing only seven leaves. As the text is complete, a leaf, probably blank, is wanting, but whether at the beginning or the end, it is a little difficult to ascertain. From an examination of the water marks, however, I infer that it is the first leaf that is wanting and that the printer began on what was really the second leaf, though he called it **a**1.

As I have said above, this edition is not mentioned in any list that I have been able to examine. It resembles Machlinia's edition in having 27 lines to the page, but in every other respect it is quite different.† In the British Museum (7509. d.) there is a copy of the *Liber Aggregationis*, which is described as follows :

Begin. [fol. a. 1. *recto* :] Liber aggregationis seu liber secretorum albt magni de uirtutibus herbarum lapidum et animalium quorundaꝝ, etc. [Fol. c. 2. *verso* :] Expliciunt Secreta aliqua alberti magni d Colonia super naturis uirtutibus 7 efficacia herbarū : lapidum 7 animalium quorundam. [Fol. f. 3. *recto* :] Albertus Magnus, De. Secretis nature. Explicit. [Fol. f. 3. *verso* :] Ut autem . . . fructum capias uolumus . . . regulam . . . tradere ad sciendum ortum Lune, etc. [Fol. f. 4. *verso* :] Et Sic Est Finis. **G. L.** MS. NOTE. [1475?] 4°.

Without title page or pagination ; register a.—f. 4, in eights, except b. and c., which are in sixes. The first leaf is blank.

I have not seen this copy, and unfortunately the number of lines in the page is omitted in this case, though that is also frequently given in the catalogue. According to the register this volume contains 42 leaves.

It will be seen on comparison that this volume tallies, within certain limits with the copy now describing, though there are also some fundamental

* A peculiarity to be noticed in the capitals at the top of f. 20 *b* is that they are roman, except M, G and I of which some are gothic, and the letter A which has no cross line, but resembles the greek Α. Elsewhere also in the book the gothic and roman capital M are interchanged with rather singular effect.

† See collation in *Archæologia*, London, 1886, NLIX. pp. 338-339.

differences. In my copy **b** and **c** have eight leaves each, not six, and the whole work contains 43 leaves (originally 44 leaves, counting the blank one), whereas this copy is complete with 42, counting the blank first leaf. In all probability therefore the number of lines per page is different in the two editions. The difference in type, if any, could be ascertained only by direct comparison.

The next is a copy of the *De Secretis Mulierum*, and as it bears on a point of controversy it may be described in full.

F. 1a, Title: Secreta mulierum ab | alberto magno cōposita [Woodcut: a master with a book on a desk, instructing two scholars.]

F. 2a, with sig. a ij. : (s) Cribit philosoph^o philosophoꝝ princeps. iiij. Ethico | rum Homo est optimū eoꝝ que sunt in mūdo 7 mun- | dus &c.

F. 33b, l. 25 : Finis huius Tractatuli ve | nerabilis Alberti magni.

This is a small quarto, without date, place and printer's name, but it is generally agreed that it was printed at Cologne by Heinrich Quentell about 1480.* It has 33 leaves with the signatures : a vj, b vj, c iiij, d vj, e vj, f v. Leaf 34, or f vj, is wanting ; it may be blank, or it may contain the register. Two sizes of black letter are used: one, the larger, for the text ; the other, somewhat smaller, for the commentary. The first page contains 39 lines, excluding the signature line, the last, 26 lines. The only page which is printed in one size of type throughout is f ij, recto, and it contains 33 lines of the large type, equivalent to 40-41 of the small. Two copies, or variants of this book apparently, are quoted by Panzer (*Annales Typographici*, IV. 80, Nos. 30, 31), who says that the woodcut on the title-page represents the master and three scholars. Hain (*Repertorium Bibliographicum*, No.*557) also describes the book, but says there are two scholars. His words are : *Infra icon magistrum cum duobus (non tribus, ut Panzer dicit) discipulis*. Sinker† quotes a copy of this book in the Library of Trinity College, Cambridge, and adds this note :

In this copy, as in that described by Panzer, there is a woodcut on f. 1^a of a master with three scholars ; whereas Hain expressly speaks of two ("non tribus, ut Panzer dicit.")

and so he queries Hain's No.* 557. My copy, however, has unmistakably two scholars only, just like Hain's. The conclusion plainly is either that there

* This may be so, but it is a very different looking book from the *Compendium theologicæ veritatis* of Albertus Magnus, printed by Quentell's heirs in 1506.

† *Catalogue of the Fifteenth-Century Printed Books in the Library of Trinity College, Cambridge*, 1876, No. 87.

are two title-pages to this edition, or else that Quentell issued two editions, which have not been distinguished from one another because they have never been compared. It remains to be decided whether the edition with the *two scholar* vignette agrees throughout with that with the *three scholar* vignette. I think it is quite possible that they may differ entirely and yet contain the same number of leaves. In the meantime as I am unable to settle it, I must leave the question open. The contents correspond with the edition described in Part III.* (Hain No. 555), but there are various readings both in the text and in the commentary, and the present book is besides inaccurately printed.

The third copy is one of the *Liber Aggregationis*, and it also seems to have been printed in the fifteenth century :

F. 1a, Title: Liber aggregationis seu liber secretorum (*sic*) Alberti magni | de virtutibus herbarum, de virtutibus lapidum et, de virtutibus et efficacia animalium quorundam |

F. 1b: Liber aggregationis seu liber secretorum Alberti magni de | virtutibus herbarum : de virtutibus lapidum : 7 de virtutibus animalium | quorundam Prologus |
Icut vult ph'us in pluribus locis Omnis scientia | de genere bonorum est &c.

F. 12a, l. 16 :

Expliciunt secreta aliqua Alberti magni de. colonia super na | turis virtutibus 7 efficacia herbarum lapidum 7 animalium quorundam |

F. 11b, blank.

Svo, in sixes. The first sheet has no signature, the second has the signature b. There are 12 leaves in all; 34 lines to the page; gothic character. There is no date, place or printer's name.

This copy belonged formerly to Dr. George Kloss and has his book-plate. In his sale-catalogue (London, 1835, p. 7) it appears as No. 66, and is there assigned (though with a query) to Bartholomæus de Winckel, or de Unckel, of Cologne, 1480, or 1483. It has been overlooked by Panzer (as Kloss has noted) and also by Hain, and I have not been able to identify it with any copy in the British Museum. This edition contains only the *Liber aggregationis*, and not the *De mirabilibus mundi* which follows in most other editions, and it exhibits some various readings.

* *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. p. 208.

Long after these come the other two copies I have to mention. The first of them was printed at Strassburg by Zetzner, in 1615. It is a re-issue in the same form and containing the same number of pages as the edition printed by Zetzner in 1607, to which I referred before.* Then in 1625 Zetzner brought out another edition in the same square 16mo form as its two predecessors. Like them also, and like so many of its successors, it contains the closely related work *De Secretis Naturæ*, or *De Physiognomia*, of Michael Scotus, of which a detailed description has been given in papers read to this Society.†

There seems to have been no end to the demand for these books, for in 1614, and again in 1616, and 1663, the *Liber Aggregationis* was included in the compilation of Longinus, called *Trinum Magicum*, which will be considered under its proper date below.

In the catalogue of authorities cited by Gesner in his book of secret remedies (1552, p. 23) is the work *de Quinta Essentia*, by Raimundus Lullius, already quoted by me under the title *De Secretis Naturæ*.‡ It was first published at Strassburg and afterwards at Nürnberg. Gesner's account is as follows :

Raimundi Lulli liber optimus et doctissimus de quinta essentia, qui Argentorati olim editus est et nuper Norimbergæ, sed in multis differens. Mihi exemplaria duo manuscripta sunt, et alia duo apud amicum vidi, quæ omnia et inter se et ab impressis differunt.

I have not seen the Strassburg edition, which was published about 1516, but as far as the other editions go : Venice, 1542 ; Nürnberg, 1546 ; Cologne, 1567, I can confirm what Gesner says. I also have got a manuscript of Lully's tract. It is in Latin, and is written on paper in a contracted hand of the fifteenth century. It contains 103 leaves, and comparison with the printed copies substantiates the differences between the manuscript and printed copies, alluded to by Gesner.

* *Trans. Archæol. Soc. Glasgow*, (N.S.) 1886, I. p. 212.

† The first paper was read so long ago as March, 1878. The second paper embodying all that that I have been able to find about Michael Scotus and his writings was read in April, 1886. This will be printed in the *Transactions*, as supplemental to these sections about Albertus Magnus.

‡ *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 261.

Since the sketch by Zacharias Lilius of the progress of the polite arts, logic, rhetoric, grammar, arithmetic, music, geometry, astronomy, published in 1496, has been counted among the histories,* it would hardly be fair not to recognise a book of some importance, which is said to have been published in the same year, and which treats of these arts themselves. The author, Gregorius Reisch, flourished at the end of the fifteenth century, was head of the Carthusian monastery at Freiburg and confessor of the Emperor Maximilian, and wrote a cyclopædia of knowledge, one of the first, entitled *Margarita Philosophica*. According to the descriptions of Panzer and Hain,† the first edition of this work has no date, or place, or printer's name, but was probably printed at Heidelberg in 1496. Hain did not see a copy of this edition and seems to have taken his notice of it from Panzer, but there is no evidence that the latter authority saw a copy. There is no copy of this date in the British Museum catalogue, and I have not seen it mentioned in any other list. All this shows that it must be a book of extreme rarity. The colophon, however, of the 1503 edition, to be mentioned immediately, raises a doubt as to whether an edition of 1496 ever existed. For in that colophon the edition of 1503 is distinctly termed the first. But, at whatever time it was published, it soon went through a number of editions, showing that it met a demand for instruction, and that the people were anxious to learn what passed for the best knowledge upon all topics. A list of these editions can be gathered from Panzer, and it brings to light the fact that parallel editions were run at Freiburg, Strassburg and Basel.

Freiburg, Joh. Schottus 1503, 4to, Panzer, VII. 58. 1.

Strassburg, Joh. Grüninger 1504, 4to, VI. 30. 37.

Freiburg, Joh. Schottus 1504, 4to, VII. 58. b (misprint for 2). -

Strassburg, Joh. Schottus 1504, 4to, VI. 31. 44.

Strassburg, Joh. Grüninger 1508, 4to, VI. 39. 107.

* *Trans. Archæol. Soc. Glasgow*, (N. S.) 1886, I. p. 195.

† Hain's notice (No. 13852) is brief:

Reisch (Gregorius) Ordin. Carthus. *Margarita Philosophica*. Ex Heidelbergæ III. Kal. Ianuarias MCCCCLXXXVI. s. l. a. et typ. n. 4. (*Fortè Heidelbergæ eod. anno*)

Panzer, *Annales Typographici*, Norimbergæ, 1793, I. p. 459. No. 13.

Basel, Mich. Furter, Joh. Schottus 1508, 4to, VI. 184. 64.

Strassburg, Joh. Grüninger 1512, 4to, VI. 55. 244; IX. 359. 244.

Strassburg, Joh. Grüninger 1515, 4to, VI. 69. 353.

Basel, Mich. Furter 1517, 4to, VI. 199. 181.

Basel, Henr. Petrus 1535, 4to, VI. 305 (misprint for 308). 1033.

Brunet* quotes a Basel edition of 1583, 4to, and says that it and the edition of 1535 contain additions to the original work by Oronce Finé, which are included also in Gallucci's Italian version, Venice, Barozzi, 1599, 4to.

The British Museum has a good representation of the early editions. The following are taken from the catalogue: Grüninger, 1504; Schottus, 1504; Furter and Schottus, 1508; Grüninger, 1508; Grüninger, 1512; Grüninger, 1515; Furter, 1517; Henricpetrus, 1535; Italian translation, 1599.

Of the different issues I have examined only those of 1503, 1517, and the Italian translation dated 1600.

In the Library of the University, Glasgow, there are two copies of the 1503 edition. One of these, in the Euing collection, is on thick strong paper and is in the original binding, wooden boards covered with stamped hogskin, the other is in Professor Allen Thomson's collection, and is on fine thin paper. Whether this difference be accidental or intentional, I am unable to say.

The title-page consists of the two words: *Margarita Philosophica*, in black letter, and the rest of the page is occupied with a large woodcut representing the arts and sciences under the three heads of divine, natural and moral philosophy. An elevated three-headed female figure with wings, holding an open book in the right hand and a sceptre in the left, typifies the triple philosophy—natural, rational, moral, of human affairs. Surrounding the central figure at a lower level are other seven female figures with the symbols of the different arts, and all this is enclosed in a circle on which are inscribed the subdivisions of philosophy and the names of the polite arts aforesaid: logic, rhetoric, grammar, arithmetic, music, geometry, astronomy. Outside the circle, at the top, divinity is represented by Augustine, Gregory, Jerome and Ambrose; below, Aristotle is the representative of natural philosophy; Seneca, of moral philosophy. Throughout the book similar full-page symbolic

* *Manuel*, Paris, 1863, IV. col. 1201. There is a copy in the Library of Trinity College, Dublin, *Catalogue*, Dublin, 1883, VII. p. 69.

woodcuts depict the main divisions of the subject, and accompanying the text there are besides a multitude of illustrations, large and small, partly symbolic, partly descriptive and diagrammatic. The book is printed in roman character, and contractions are employed in great abundance. There are signatures, but no pagination or catchwords. The first seven pages are occupied with the title, the reverse of which is blank, the contents, the symbolic drawing denoting grammar as the key to all knowledge, verses addressed to Reisch by Adam Vuenherus Temarensis, and, lastly, the subdivisions of philosophy, after which the text begins. The subject is divided into twelve books. The first is on grammar beginning with the alphabet, Hebrew, Greek and Latin, and going on to the parts of speech, construction and prosody. Book two deals with formal logic, propositions, reasoning, the syllogism and fallacies. Book three treats of rhetoric, Book four of arithmetic, and Book five of music. This is a specially interesting section, as it is an early dissertation on the subject, and contains besides some music printing. Book six is devoted to geometry, and Book seven to astronomy, which is that of Ptolemy, and which is elucidated by diagrams of eclipses and schemes of cycles and epicycles. Under this head comes geography, followed by a treatise on astrology, which gradually drifts into divination in general and necromancy in particular. Book eight is occupied with natural philosophy: the general properties of material objects, fate and chance, miracle, motion, generation and corruption, time, space, and vacuum. Book nine discusses the origin of natural things, the elements, fire, rain, hail, the saltness of the sea, earthquakes, wind, thunder, comets, alchemy and the metals, plants, animals, man, monsters. Books ten, eleven and twelve are concerned respectively with the senses, the intellect, and morality.

It is quite impossible to enumerate all the topics reviewed by the master with his pupil, for the work is in the dialogue form, but there are two or three which may be noticed. One is the diagram (in the section on astrology) of a man with the different parts of his body represented as under the signs of the zodiac.* There is another curious anatomical drawing of the chief

* It is this picture which has been described by Southey, *Doctor*, London, 1835, III. p. 112. Pettigrew (*Superstitions connected with the History . . . of Medicine and Surgery*, London, 1844, p. 31) quotes Southey and calls the *Margarita* an "amusing work." It is hardly that.

internal organs of the body, and there is a diagram of a magnified section of the eye. There is an interesting anticipation of phrenology in a diagram of a human head, with a band of the skull removed, revealing the brain upon which the names of certain faculties are inscribed; the author being evidently of opinion that they had a local habitation as well. In the eleventh book, under the heading *De Potentiis Animae Intellectivae*, the author gets into the next world and not only describes what is there but gives drawings of the different localities. The picture which accompanies the 42d chapter: *de locis infernalibus quattuor in campo miserie*, is interesting as the representation of a medieval conception of the place of misery, and is a curious mixture of pagan ideas and a later demonology. In front is the river, the Styx, of course, on which is a boat with a freight of souls rowed by an old man, labelled distinctly Charon. The river issues from below the mouth of the infernal monster, which is represented as covered with scales and belching forth flames from every part. The draughtsman has left the form of the monster rather vague, but as it retires into the background it develops into what looks like a series of coke ovens in full operation. Souls of human beings are depicted as crowding in and around hell's mouth, and fantastic demons with beaks, and horns, and claws and the fiercest of moustachios are subjecting souls to punishment or torture with clubs and hammers. This conception of the *loci infernales* as the mouth of a ruthless dragon, is illustrated in the contemporary poem of Damerval.*

The work is provided with an elaborate index carefully constructed to facilitate reference and concludes with an ode from Paulus Volzcius to Reisch, whom he calls Georgius, not Gregorius. Then comes the colophon:

Chalchographatum primiciali hac
pressura, Friburgi, p Ioannē Scho
ttū Argeñ. citra festū Margarethę
anno gratiæ M.CCCCC.III.

which leaves no doubt that this is the first edition.

* It is entitled *Le liure de la deablerie*, and was printed in black letter at Paris, by Michel le Noir, in 1508. The picture occupies nearly the whole title-page, and represents Lucifer sitting on the snout of the gaping monster with demons flying around, while standing below is Satan. Souls and a demon with projecting or "buck" teeth are cowering within the jaws. A similar representation is given by Wolfius, *Lectiones*, I. p. 230, and others like it will be found in other books.

The last page is occupied entirely with a large woodcut of the printer's device.

The edition of 1517 is distinguished by several differences. The title-page runs thus :

M a r g a r i t a
 Philosophica cū
 additionibus nouis :
 ab auctore suo
 studiosissima
 reuisione
 quarto
 super
 addi
 tis
 Anno domini. M.D.XVII.

This title is in gothic letter, except the last line, which is in roman, and it is printed in red, except the florid initial M and the last line which are in black. It is contained in a scroll, with rolls at the top and bottom, and the whole is enclosed in an ornamental woodcut border containing figures, grotesques, medallions, wreaths and scroll work. Altogether this is one of the most elegantly designed title-pages which I have met with.

The book is a nice 4to, printed throughout in two sizes of gothic type. It has signatures, but no pagination. The illustrations are for the most part reimpressions of those found in the 1503 edition, but, as was to be expected, they are not quite so sharp. Some have been omitted, for example, the title-page woodcut above described, and, instead of it, another embodying the same idea, but in quite a different way, has been printed on the verso of the title. Some have been added, especially in the eighth book, representing monsters,* the effects of hail and of lightning, an earthquake, and so on,

* One of these is a creature of one leg, whose foot was so big that if he lay down on his back on a hot day and held it up, it protected him from the sun, like a parasol. There is a picture of the phenomenon. He was heard of and depicted by Sir John Maundeville, and he reappears in Thomas Johnson's *Cornucopie* (sig. D 4v.), who has drawn largely from these old marvel-mongers. The picture of this abnormality which is given in the *Margarita*, 1517, sig. D 1r., will be found in *The Voyage and Travaile of Sir John Maundeville*, 171., edited by J. O. Halliwell, London, 1839, p. 156.

and two or three have been altered. In this edition the index is repeated, and at the end of it is a small woodcut of the printer's device. Then follow the author's address to the student and the congratulatory odes, except that by Volzius, which is omitted, and the work concludes with the colophon:

Margaritam Philosophicam nouis
 characteribus dilucidatam, in-
 dustria sua, ac ere proprio
 Michael Furterius im-
 p̄ssit Basilee. An
 no. 1517
 die vero. 5.
 Martij

In every respect this is a very interesting and attractive work. It is contemporary with the *Lucidarius* of Honorius described on a former occasion,* goes over the same ground, but much more minutely and systematically, and is as good a survey of the amount of knowledge and speculation, of the method of instruction by question and answer, of the extent of the field cultivated and the way of cultivating it, at the end of the fifteenth century as any single book that has been quoted. It is a summary of what was thought and taught in science and philosophy about four hundred years ago, and it is therefore a work indispensable to the student of the history and progress of knowledge.

The only other edition of the work which I have seen as yet, is the Italian translation, which drops the student at once into the region of utilitarian commonplace, with nothing whatever to attract him. The large symbolic plates have all disappeared, most of the smaller ones in the text have been omitted, while of those retained the execution is in every way inferior. It is a quarto volume printed in small italics, not always distinctly, and it has none of the finish of the edition of 1517.

According to Brunet and according to the British Museum list this translation was published in 1599, but the copy which I have is dated 1600, and was printed at Venice by Jacomo Antonio Somascho. The translation was made by Giovan Paolo Gallucci, and there are included in the volume not only the *Margarita Filosofica* itself, but the additions made to it by Oronce Finé,

* *Trans. Archæol. Soc. Glasgow*, 1883, II, p. 186.

the mathematician, the teacher and friend of Mizaldus, and supplementary matter drawn from other sources. These additions are half as large as the original work and comprise minute instructions on arithmetic, practical music, architecture, drawing and perspective, the construction of an astrolabe, &c., &c., adding doubtless to the value of the book as a vehicle of instruction, but detracting somewhat from its antique character.

The *Margarita Philosophica* is a very rare book in all its forms, and I regret not having been able to examine the copies in the British Museum and elsewhere. I hope, however, to have an early opportunity of doing so and of giving a more comprehensive account of the editions of this work, so important for the history of science and learning at the beginning of the sixteenth century.

A very rare and choice natural history collection, contemporary with the preceding, was printed at Paris, by Kerver, in 1504. Besides that edition Brunet* enumerates other six, printed respectively by Le Noir, without date, by Treperel in 1510, by Le Noir in 1524, by Treperel in 1527, and by Arnoullet in 1529 and 1534, so that it must have been a popular book. The copy I have seen is of the 1527 edition. It is a little black letter quarto, with a few rude woodcuts. The title is printed in alternate red and black lines, and the lower half of the page is occupied with a vignette of what seems intended to represent the universe, or cosmos. The title begins: *Cest le secret de l'histoire naturelle cōtenant les merueilles et choses memorables du monde*. At the end of the title, in red, are the figures xxvii., which some copies have and others want. They denote the number of sheets the volume contains. On the reverse of the title is a large woodcut of a general, or king on horseback with troops. Then come alphabetical indices of the countries described, and of the remarkable things recounted, followed by the text. On the reverse of f. cv. is the colophon :

Icy prēt fin le liure moult excellent et recreatif appelle le liure des merueilles du monde & des choses memorables a plusieurs incōgneues Nouuellement imprime a Paris pour Jehan treperel Demouant a paris en la rue neufue nostre dame a lenseigne de lescu de frāce. Le. xvii. iour du moys daoust. Mil. v. c. et xxvii.

There ought to be another leaf, but whether it is blank, or whether it contains

* *Manuel*, Paris, 1864, V. col. 255.

a device or a register, I do not know, as it is wanting in the copy I have examined. The book has signatures and the leaves are numbered as well.

The matter is taken from Pliny, Solinus, Herodotus, Gervasius and others, In the first half of the book the matter is arranged alphabetically by countries, and under each are collected the memorable things related by the said authors. The last half deals with natural history. This is the only treatise of the kind I have met with arranged geographically. Every page is replete with wonders, to the enjoyment of which it is best for the reader to resign himself without any carping or questioning. There is no mention of the compiler but one ought to be grateful to him for his labours. Brunet, however, as a wise and matter-of-fact bibliographer, has a different estimate of the work, and says that it is "plus curieux qu' utile." If it be so, it is just like Brunet's estimate of it.

Under the title *Cælum Philosophorum, siue de Secretis Naturæ Liber*, Philip Ulstad published a work in the sixteenth century. Watt cites an edition dated 1525, but the earliest I have examined is in the British Museum and is of the following year. Of the author nothing is recorded. He was a physician and wrote a little tract on the plague, printed at Basel, in 1526, by Cammerlander. On the title-page of the *Cælum* he is called "Patricius Nierenbergensis."

The heaven disclosed to philosophers—the grand accomplishment of all their desires—is the knowledge of the secret powers of nature in healing disease. These powers, wrapped up in plants and minerals were brought to light by the art of chemistry—as understood at the beginning of the sixteenth century—and more particularly by the operation of distillation. Notwithstanding its florid title, therefore, it is nothing else than a treatise on that important chemical process. It was a successful book and was frequently printed. There were editions in 1526 and 1528 in small folio, by Grüninger at Strassburg, another, without place or date, uniform with the preceding, one in 1535 in folio, by Cammerlander at Strassburg, and others in folio and octavo at Strassburg, Paris, Lyons and Treves. It was translated also into French and German; an edition in the latter language appearing in 1551, at Franckfurt, in small folio, and other editions in 8vo at Dresden and Strassburg. All these editions are illustrated with woodcuts of the retorts, stills, flasks,

receivers, furnaces, which the old chemists and pharmacists employed in great and even grotesque variety of form.

Whether or not it was translated into English is doubtful, but if it was, I do not know that it was ever printed. John Daye, the printer, in his address to the reader prefixed to Morwyng's translation of the *Treasure of Evonymus*, promises that because in that work frequent reference is made to Ulstadius and Brunswick, therefore he will also publish them.* That was in 1559; but as a matter of fact Brunswick's book had been translated into English and printed in small folio with illustrations identical with those in Grün-inger's early editions of Ulstad, by Lawrence Andrewe at London in 1527.† Perhaps Daye was not aware of this fact, or perhaps he meant simply to reprint it, but as for Ulstad's *Cælum Philosophorum*, the translation, so far as I know, would have had to be made. But it never was done; at any rate there is no mention of any such work having been printed by Daye or any one else. It is not impossible, however, that a manuscript of the translation exists in the British Museum, Bodleian or elsewhere. This is a question to which I may recur on some future occasion in dealing with the bibliography of the book in greater detail, an attention of which its existence for two hundred years is not undeserving. There is always a certain amount of profit to be derived from the careful examination of a book, when its vitality has been vigorous enough to carry it through some twenty editions during so long a period.

A treatise by a certain Raoul du Mont Verd was formerly alluded to.‡ Brunet§ quotes six editions: Paris, 1531; Lyons, 1538; Lyons, no date; Poitiers, about 1544; Lyons, 1586, and Rouen, 1609. I have not seen any of these, but I have met with two not known to Brunet.

* I have quoted the passage below for a different purpose.

† It is called: *The vertuose booke of Distyllacyon of the waters of all maner of Herbes, with the fygures of the stylatoryes, first made . . . by . . . Master Jherom bruynswyke. . .* and the title is printed in red and black. This is a very fine book.

‡ *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 260.

§ *Manuel*, Paris, 1862, III. col. 1874. Graesse (*Trésor*, Dresde, 1863, IV. p. 595) adds nothing to Brunet's list.

¶ Les fleurs et Secretz de Medecine : contenants plusieurs Remedcs. et Receptes : a la conscruation de la sante du corps humain. Et contre toutes maladies : comme de Peste, Fiebures : Picuresies : Cathertes : Grauelles : ee autres semblables. Jadis faict et enuoye a Artaxerxes : Roy des Perses par Ipocras medecin tressubtil. Et depuis traduyt de latin en vulgaire Francois, par maistre Raoult de môt Vert. Et presentemēt recogneu par maistre Ancelme Juliani : docteur en medecine, en Luniversite de Montpellier. 1547.

¶ On les vend a Paris, en la rue Neufue nostre Dame : a lenseigne saint Nicolas.

This is a small 8vo, printed in a well marked gothic type ; the title is in black and red. The first twelve leaves contain the title and table of contents, and the text is contained in signatures B to m in 8, and n in 4. The leaves are numbered as well, but in an irregular fashion, for the first sheet is paged i. to xvi., but after that the leaves are numbered xvii. to lxxxix. inaccurately in many instances. On the reverse of leaf lxxxix. is the colophon :

¶ Cy finent les Fleurs et secretz de medecine.
Nouvellement imprimez a Paris : pour
Pierre Sergent : libraire demou-
rant en la rue Neufue nostre
Dame : a lenseigne
saint Ni-
colas.

Then the last leaf, not numbered, contains the device : a dove perched on a tree, with a serpent projected in a ring upon it, within a scroll border, on which are the words : Estote Prvdentes Sicvt Serpentes Et Simpliccs Sicvt Colombe.

The receipts have been gathered out of the writings of the old physicians and are arranged under such heads as : the veins and their significance for blood-letting, the physic of the months, properties of plants, medical secrets and cures, and miscellaneous receipts. There is a brief astrology for shepherds, with special reference to the meaning of thunder in the successive months of the year ; a chapter on comets, and what they portend in the different signs of the zodiac, with quaint woodcuts of the signs ; and then comes a singular dissertation on the magnitude of the heavens, and the different planets, and the sun and moon, and on the region called limbus and that called hell, of which the author draws a most harrowing picture, far more distressing than that of Reisch. It is a place, he says :

calligineux, obscur, nubileux, sulphureic que, horrible, infect, puant, fetulant, et tenebreux, enuennime de neuf especes de feu . . . En telle prison plaine de douleur, de langueur et de toutes diuerses sortes de tournemens a iamais sans fin seront tourmentez les malheureux oppiniastres et miserables lhutheriens, auecques tous ceulx qui ont blasphemé et regnie le nom de Dieu, & qui nont pas garde ses saintz commandemens.

In addition to these invaluable and authentic topographical details, there are sections upon subjects with which all are more or less familiar, but which many people have a desire to see in print, and which are those discussed by Albertus Magnus, and Michael Scotus, and Caspar Nigrinus.

As a mere specimen of a French book of the earlier half of the sixteenth century, and as revealing also the current instruction on a variety of topics, Raoul's collection is quite fascinating. In Brunet's eyes, however, this book is no better than the one above described. He says that it is rare, "mais aujourd' hui sans utilité." It is certainly rare. But, *sans utilité?* a book that tells us about limbus and hell, *Sans utilité!* To Brunet, may be; but he should have considered that there might be some even to-day who had not his opportunities of becoming acquainted with those parts, and that to them a trustworthy guide-book, such as this, would be of real service.

The other copy has the following title :

Les Fleurs Et Secrets De Medecine, Ov Est Traicté De Plvsievs Receptes, Et remedes conseruatifs pour le corps humain, contre toutes maladies. Recueilly par maistre Raoul du mont Verd, Docteur en Medecine. Nouuellement reueus & corrigez,

A Roven, Chez Iean Osmont, dans la Court du Palais. 1602.

This is a common-place shabby production, got up for cheap circulation, from which has been cut out all about the comets, and the size of the heavens and the sun, and the future habitat of stiff-necked Lutherans. I presume it is an earlier issue of the Rouen, 1609 edition, mentioned by Brunet. Had Brunet found fault with this edition, one might have tried to agree with him. The credulities of 1547, however unlike those of Brunet's day, set forth appropriately in an ornate little black-letter volume, are attractive and acceptable, inasmuch as both book and beliefs are according to the fashion and the time; but the same notions, seeking recognition for their utility alone, reprinted sixty years later, in staring roman type on a graceless page, have their untimeous absurdity

so offensively displayed that it is hard to realize that the contents of the two books are the same, and that externals have so distinct an influence on essentials.

Among the editions, described in previous parts of these notes, of Gesner's treatise of secret remedies or work on distillation, better known under the title of *Evonymi Thesaurus*, there are two of quite special value now to be included. One is a copy of an edition, not hitherto mentioned by any authority, and not existing in any catalogue so far as I have observed. It was printed at Lyons by Balthazar Arnoullet in 1554, a year earlier than the edition or editions by the same printer already referred to.* Both of these, it may be remembered, have Arnoullet's name in the colophon, but while one has Arnoullet's name and device also on the title page, the other bears the name and device of Antonius Vincentius. Otherwise the books are identical. From Arnoullet's edition of 1554, however, they differ throughout, proving that, when this edition had been printed off, the type was distributed and was set up anew for the issues of 1555. In them a smaller capital letter is used for the running title of each page, *cui* is altered into *quem* in the title, the index is placed in a different part of the book, and various minor typographical changes are made throughout. More evidence this, if it were wanted, of the great activity of the Lyons printers in the sixteenth century in promptly reproducing any book that was thought likely to be much in demand. But the importance of this issue does not depend merely on its rarity, or on its being prior to the other two, but rather on its date bringing it into competition with the Zurich edition of 1554, and raising thereby the question which edition of the original Arnoullet copied, and whether or not this is the first of his printing. If the Zurich edition of 1554, which is the earliest one mentioned by all the bibliographers, had been the first, one might have credited Arnoullet with great expedition for having his reprint out in the same year as the original. It is more likely however that he worked upon the 1552 edition,† and was able to have his reprint out as soon as the second edition of the original was produced at Zurich. So far as I have examined the three copies, Zurich 1552 and 1554,

* *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. p. 218.

† *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. p. 217.

and Lyons 1554, there is nothing to indicate from which the last was printed. Possibly very minute comparison of the text might give a clue, such as the reproduction of an erratum, or some other variation, but the only obvious one is the title page, which in the Lyons edition is taken, so far as it goes, from the edition of 1552, and not from that of 1554, which differs widely from its predecessor. Arnoullet, however, is careful to omit the words *nunc primum in lucem editus*, which are blindly repeated in Froschover's undated edition.

One point of difference in these three Lyons editions as compared with the originals is the number of illustrations. In the latter there are some pictures of furnaces and distilling apparatus, whereas in the Lyons issues, these are not only more numerous, but there are besides pictures of the plants which are to be distilled for the production of different kinds of "waters" and remedies. These editions claim on the title page to have an additional number of illustrations, but there is nothing to indicate where they came from or if they were drawn expressly for the work, nor is there any answer to the question what was the date of the first Lyons reprint. If Arnoullet had the 1552 edition before him there may be a reprint of 1553 or even of 1552. I know of none such and have seen no hint of their existence, so it is justifiable to infer that this edition of 1554 was the first. There is also the possibility that a different Lyons printer may have produced another edition in 1554. Indeed the printing eccentricities of the place are so peculiar, that I personally should not be surprised if within 1552-1554 more than one reprint of Gesner's book had been brought out at Lyons.

The other important copy is of the first edition of the translation into English. The title runs thus :

The Treasure of | Evonymvs, | conteyninge the vvonderfull hid se- | cretes of nature,
touchinge the most apte formes | to prepare and destyl Medicines, for the conser- |
uation of helth : as Quintessēce, Aurum Potabile, | Hippocras. Aromatical
wynes, Balmes, Oyles | Perfumes, garnishyng waters, and other mani- | fold
excellent confections. Wherunto are ioyned | the formes of sondry apt Fornaces,
and ve- | ssels, required in this art. Translated | (with great diligence, &
laboure) | out of Latin, by Peter Mor- | vvyng fellow of Magda- | line Colledge
in | Oxford. |

Imprinted at London | by Iohn Daie, dvvelling ouer | Aldersgate, beneath Saint |
Martines. | Cum priuilegio ad imprimendum | solum. |

This is a small 4to, printed in massive black letter. There are 20 preliminary pages, unnumbered, containing the title, John Daye's address to the reader, the author's preface, list of authorities, table of chapters, and the Stationers' arms or device. The text occupies 408 numbered pages. There is no index. There is no date in the book except what is at the end of Daye's address to the reader: At London the. ii. of May. 1559, and this is usually given as the date of the edition. There are ornamental capitals, woodcuts of the plants described, and figures of furnaces, retorts, receivers, and other vessels employed in the operations.

The first English edition is unquestionably of very great rarity, but as this particular copy has on its title-page the well-known signature of W. Herbert, the bibliographer, it is the original historical copy, and in this respect is unique.*

The second edition of 1565, formerly mentioned,† is an inferior reprint. The type is coarser and clumsier and the impression is not so sharp. This is another example of the first edition of a book being typographically superior to those of it which appeared afterwards. The only advantage which the later edition has lies in its index.

Another copy of Alexis which I have seen demands a few words, for it re-opens the question as to the language in which that work was originally printed. This is the title-page:

D. Alexii Pedemontani De Secretis Libri Sex Mira Qvadam Rervm Varictate Referti
ex Italico in latinum sermonē nunc primum translati. Per Ioannem Iacobum
weckerum, medicum
Basileae Anno M.D.LIX.

* Ames did not know this book, and Herbert was the first to describe it, *Typographical Antiquities*, London, 1785, I. p. 630. His description is full, but he does not say how many preliminary pages there are, and he makes one curious mistake in his account. Daye in his preface says: "And because thauthor . . . do in many places of this his work, send the Reader vnto Philippe Vlstadius & Brunsvick: therefore I will . . . also publish them, &c." Herbert's version runs: "And because thauthor . . . do . . . send the Reader vnto Philippe VI stadius & Brunsvick: therefore, &c." The origin of the misprint is patent, but it is not so easy to explain how Dibdin repeated it (*Typ. Antiq.*, Lond., 1819, vol. IV. p. 71) without noticing that it is mere nonsense as it stands. Ulstad's work has been referred to above.

† *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 188.

This is the first edition of Wecker's translation, and I have no doubt that it was printed by Peter Perna. It forms a neat little octavo, and contains the first part in six books. Prefixed are an epistle by Wecker to Abbot Caspar Muller, dated Basel, July 7, 1559, and Alexis' preface to the reader telling how he came to write the book. In his epistle, Wecker explains that he translated the work, partly because he thought its contents would be serviceable, partly to keep up his knowledge and exercise himself in Italian, for, as he says, what we do not practice we soon forget. The rest of the epistle is devoted to a brief outline of the contents of the different books. This edition sold rapidly and a second was called for within a year. It was just mentioned formerly,* but it is now worth while giving the title.

Alexii Pedemontani De Secretis Libri, Mira quadam rerum varietate vtilitateq̄;
referti, longe castigatiores & ampliores quàm priore editione.

Num sex prioribus, septimus accessit ex eiusdem authoris appendice factus: omnes ex
Italico sermone in Latinum conuersi.

Io. Iacobo weckero Basiliensi Medico interprete.

Basileae, Apvd Petrvm Pernam M.D.LX.

This is necessarily a thicker volume, but it is not so nicely printed as the previous one. Prefixed is an epistle by Wecker to Höcklin, Rust, and other councillors of Mömpelgard, which is different from that in the first edition. Wecker says that when he came back from Italy, the weather was so hot that he could not do any serious work, but not to be absolutely idle, he thought he might translate some useful Italian book. This would both prevent him forgetting the language he had acquired during some years' residence in Italy and be helpful to those unacquainted with it. Alexis' six books had just then been published in Italian, and the contents which were generally practical as well as medical, interested him doubly, and as the book suited his purpose he translated it. When the translation was seen by his friends they urged him to publish it and he did so. It was well received, and when he was aware of this he revised it, added another book which the author had in the meantime published and brought it out afresh. This letter is dated Basel, July 20, 1560, just a year after the other.

* *Trans. Archaeol. Soc. Glasgow*, 1883, II. p. 251.

Three years later came another edition, also mentioned by me before,* but which may now be described more fully.

D. Alexii Pedemontani De Secretis Libri Septem, A Ioan. Iacobo Veckero Doctore Medico, ex Italico sermone in Latinum conuersi, & multis bonis Secretis aucti. Accessit hac editione euisdem weckeri opera, octauus de artificiosis uinis liber. Basileae. Apud Petrvm Pernam M.D.LXIII.

Wecker's epistle dated from Basel, August 1, 1563, is addressed to Nicolaus a Cruce, French councillor and ambassador to the Swiss. He says that about three years before he translated seven books of secrets from Italian into Latin, and the translation had been so well received that he thought it worth his trouble to revise the work again and add a number of secrets of his own. He then gives a description of the contents of the books and winds up with some complimentary reasons for dedicating this edition to the said Nicolaus a Cruce. This is, therefore, the third edition of Wecker's translation of Alexis.

On a previous occasion† I had to discuss the history of this collection of secrets, and to consider the difficulties which arise in connection with the date and language of the first edition. In the epistle to the revised second Italian edition of 1557, the author himself says that the work was originally written in Latin and was hurried off without revision to Venice to be printed, but in a few months later he heard that a translation into Italian had been published. This sold rapidly and was going to be reprinted, when the author consented to revise it and correct the mistakes which he had detected in the translation, due as he thought to original errors of his own, as well as to misunderstandings on the part of the translator. The question then comes to be, was the work *printed* originally in Latin in 1556, or was the first edition of the book in Italian, the translation having been made from the original manuscript. Formerly I was unable from want of evidence to accept either alternative, but with the new facts and reconsideration I am inclined now to believe that there was no original Latin edition, but that the Italian translation was the first form in which the book was published. If we are to believe the author, this was in 1556; if we are to believe Brunet, it was in 1555. In support of the

* *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 251.

† *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. pp. 218-220.

Italian translation being the original published form is the fact that there is no mention that I can find of a prior Latin edition. It must be admitted, however, that until a copy of this first Italian edition has been examined there is still some uncertainty. So far as I can see it is only from it that we can ascertain precisely whether it is the first or not.

Confirmation of the preceding is derived from the three copies of Alexis just mentioned. For from the epistles it is obvious that Wecker was aware only of the Italian edition of Alexis' work, and, as he seems to have been in Italy at the time the book came out, he would surely never have been at the trouble to retranslate into Latin the Italian translation of a work which had appeared originally in Latin but a few months before. He could not have failed to know whether the original was in Latin or not. Wecker, however, says nothing about it, nor does he allude to Alexis' *second* letter published in 1557, which tells how Alexis came to revise the Italian version. It is probable, therefore, as has just been said, that although Alexis composed the work in Latin, it was not printed in that language, but was translated from his manuscript into Italian, in which it was first published.. If this be so, it does away with the difficulties discussed in a preceding part of these notes;* it accounts for no copy of an original Latin edition being mentioned, and for Wecker's claiming his translation into Latin to be the first.

In six or seven years more, Wecker, as has been already narrated, made a German translation at the instance of several friends. The preface is dated Colmar, February 15, 1569, and the book is dated 1570. It was reprinted in 1573, with the original preface. Although the 1570 edition contains only six books, there are differences between it and Wecker's own Latin translation of 1559.

That Alexis' book was one of the popular treatises during at least two centuries would hardly require repetition here, if it were not that now and again one comes across fresh evidence of the fact. A kind of pocket edition of it printed at Paris in 1573† and in 1576‡ has been spoken about already.

* *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. p. 219.

† "Some early treatises on Technological Chemistry," § 2. Nos. 10 and 13, in the *Proceedings of the Philosophical Society of Glasgow*, 1887-88, XIX. pp. 144-145.

‡ *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. p. 224.

A reprint precisely in the same style appeared at Rouen :

Les | Secrets | Dv Seignevr | Alexis Piemon- | tois. | *Reueu, corrigé, & augmenté*
d'une | infinité de rares Secrets. |

Derniere Edition, | *A Rouen,* | De l'Imprimerie de Robert de | Rovves, sus la
 Renelle, pres | les Lyons couronnez. | 1614. |

This is a 16mo, of 911 pages, and 81 pages of index, and corresponds page for page with the Paris edition. The printer, however, has dropped pp. 871-4, containing the introductory epistle to the section on "Oecoiatrie;" and he has done so deliberately, for while there is a break in the pagination, the signatures Iii iij and Iii iiij run on continuously. There is nothing to remark about this reprint. Only, as it contains (pp. 760-846) the "receipts from divers authors," which form a translation of the *Kunstboeck* of Andriessen, it must be added to the editions of the translation which I have given elsewhere.* This copy was got after the list of these was printed.

Chronology now brings us to some English books, printed towards the end of the sixteenth and beginning of the seventeenth centuries. I have had occasion several times to refer to similar contemporary works, attractive, as illustrating both the typography and the science of the time. The series now under consideration contains not less important volumes than those already quoted.

First among these are works by Fioravanti, whose name has been before us more than once.† Leonardo Fioravanti was a native of Bologna and was born about the beginning of the 16th century. He became a physician, practised in Palermo from 1548 to 1550, sailed to Africa with the Spanish fleet, returned to Naples in 1555, went to Rome, Venice, again returned to Bologna, where he was made doctor and chevalier, and died there September 4, 1588. Between the years 1564-1582 he published a number of works, lists of which are given by various writers,‡

A savage verdict was passed upon him by Theile, so savage indeed as to

* See note † preceding page.

† *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 191, p. 251 ; (N.S.) 1886, I. p. 225.

‡ Fr. Wilh. Theile in Ersch and Gruber's *Allgemeine Encyclopædie*, Leipzig, 1846, Sect. I. Th. xlv. p. 292. Hester, Preface to the translation of *A Short Discours upon Chirurgerie*, 1580. Manget, *Bibliotheca Scriptorum Medicorum*, Geneva, 1731, I. ii. p. 287. Chaumeton in *Biographie Universelle*, Paris, 1856, XIV. p. 140.

seem disproportioned to his demerits. He says that "he succeeded by "shameless bragging and swagger in cheating the public and at the same time "making himself a name in medical literature. After the fashion of the time "he puffed several of his own prescriptions of which the very complex Balsamus "Fioravanti has survived until recently, and has in the form of vapour been "used for weakness of the eyes." He then attacks his writings and says "that "they are without the smallest value and yet they went through from three to "five editions each and some of them were translated into Latin, German, "French and English." Even supposing that that were all strictly correct, it would be hardly worth while in the present state of medicine and other arts and sciences to say of such writings as Fioravanti's, three hundred years old, that they are "without the smallest value," or to lose one's temper over the author having been a successful empiric, just as if there were no such books or persons at the present day. And if it was the fashion of the time to puff, why blame Fioravanti in particular for puffing? It is curious how a historian will not accept immutable byegone events simply as such, and leave them to teach their own moral.' In this particular case was Fioravanti a quack? One may with all confidence assert that his medicines could not do what he said they could, but did Fioravanti himself disbelieve it? One wishes Theile had given some proof, other than his mere authority, for the character of Fioravanti he wishes his readers to accept.

Pretty much to the same effect is the opinion of Chaumeton. He says that his writings contain the bragging which he put in his discourses and every page bears traces of a ridiculous vanity; that he describes the successful results of unheard of surgical operations, and the virtues of his medicines; that he was an empiric if not a quack; that his works received more consideration than would have been given to those of a modest practitioner; that with mediocre ability and boundless boasting he acquired a brilliant reputation which he retained till his death. From all this—if correct—one may conclude that Fioravanti was a very clever fellow, who possessed at least one secret of success: to constrain or persuade the age he lived in to take him at his own valuation.

But, worthless or not, his books of secrets exist, and they therefore must be mentioned. One is the translation of *La Chirurgia*:

A Short Discovers Of the excellent Doctour and Knight, maister Leonardo Phioravanti Bolognese vppon Chirurgie. With a declaration of many thinges, necessarie to be knowne, neuer written before in this order: whervnto is added a number of notable secretes, found out by the saide Author.

¶ Translated out of Italyan into English, by Iohn Hester, Practitioner in the arte of Distillation.

¶ Jmprinted at London by Thomas East, 1580.

This is a small black letter quarto, of 8 preliminary and 64 numbered leaves. The preliminary leaves contain the title, with the arms of Edward de Vere, Earl of Oxford, on the reverse, Hester's dedication to the said Earl, address to the reader, at the close of which is a list of Fioravanti's works, table of contents and a brief statement of the reason of the superiority of modern to ancient physic and chirurgery. The numbered leaves contain the text.

On the verso of the last leaf are the printer's arms and his motto: Mievlx. vavlt. movrir. en. vertv. qve. vivre. en. honcte. and the colophon: ¶ Jmprinted at London by Thomas East. 1580. On the title-page is the printer's crest of a black horse, with a white crescent on the left shoulder, and the motto as above.

This is a collection of remarkable surgical cures effected by means of the author's balsams and syrups and other concoctions. It is needless to criticize what he says. Towards the end he gives the preparation of certain substances involving some chemical knowledge. The methods yielded the products undoubtedly, but the knowledge of them was quite empirical. Among the substances prepared was chloride of lead called *lac Virginis*, got by mixing a solution of salt, *sal gemme*, with one of lead acetate. When this is done, then, as Fioravanti says, "thou shalt see a straunge thing. For as soone as they are mixed together, they will tourne to a white Unguent like Ceruse or white lead." This is an early notice of the compound, though it must have been known earlier.

Hester edited the translation of the *Regimente de la peste* under the title: *The ioyful Iuel*. It was printed in 4to at London by W. Wright in 1579, and is mentioned among Fioravanti's books in the British Museum, but I have not examined it.

A third work by the same author is the following :

A Compendium of the rationall Secretes, of the worthie Knight and moste excellent Doctour of Phisicke and Chirurgerie, Leonardo Phiorauante Bolognese, deuided into three Books.

In the first is shewed many secretes apperteinyng vnto Phisicke.

In the seconde is shewed many secretes apperteinyng vnto Chirurgerie, with their vses.

In the third is shewed diuers compositions, apperteinyng bothe to Phisicke and Chirurgerie, with the hidden vertues of sondrie vegetables, animalles, and mineralls, and proued wel by this Authour, hetherto neuer set out before.

¶ Imprinted at London by Jhon Kyngston, for George Pen, and I. H. 1582.

This is a charming little black letter octavo, of great rarity, executed by the printer of the first English edition of the *Secrets of Alexis*. It was overlooked by Ames amongst Kingston's books, but it was recorded by Herbert.*

As it is the first edition of the translation it of course accompanies the first edition of the Italian, 1564, already described,† which is of equal rarity. The translator is again John Hester, who dedicates the book to "Maister Richard Garth Esquire," in a short discourse on the mutability and progressiveness of the arts.

A few years later, in 1596, Hester issued in a small 4to volume, printed at London by Valentine Sims, translations of Paracelsus' *hundred and foure-teene* experiments, *Works* by Penotus, *Secrets* of Hollandus and the *Antidotarie for Gunneshot* of Quercetanus. This collection, together with Fioravanti's *Chirurgery* and *Rational Secrets*, and some other tracts, was reprinted in a small 4to volume, in 1652, because "the Books were very scarce, and out of Print, much desired by Ingenuous Practitioners in Physick."‡ This reprint was the only English edition of Fioravanti that I was able to bring forward, when describing the Italian edition of the *Secrets* of 1571, and the French and German versions.§

* *Typographical Antiquities*, London, 1786, II. p. 841; Dibdin, *Typographical Antiquities*, London, 1819, IV. p. 480.

† *Trans. Archaeol. Soc. Glasgow* (N. S.), 1886, I. p. 225.

‡ *Three Exact Pieces*. . . . London, 1652. W. J.'s *Epistle to the Reader*, sig. C 1 recto.

§ *Trans. Archaeol. Soc. Glasgow*, 1883, II. p. 191. See also my *Bibliographia Paracelsica*, 1885, Part II. Nos. 86 and 105.

The year 1596 is a notable one in the present chronological review, for during the course of it quite a number of receipt-books appeared.

A description has already been given of Johnson's *Cornucopiæ* published at London in 1595. I can now show a copy identical in every respect, but dated 1596.

The fourth part of these notes contained an account of *The Englishman's Treasure*, London, 1626 (1696). At the same time the fact was recorded that it had been published as early as 1596. I have now got a copy of that edition, which was printed at London by Thomas Creede in 1596. It contains Vicary's *Anatomie*, "secretes of chirurgerie," a good many of which are taken direct from Fioravanti without acknowledgment, and Turner's *Treasure of the English Bathes*, gathered and set forth by William Bremer. It seems to be the first edition of Bremer's Collection, and agrees with the edition of 1626 (1696) as far as it goes, but the later edition has a second part quite as bulky as the original, containing receipts for making waters, medicines, ointments, plasters for all sorts of maladies, and it concludes with "A Medicine for the Plague, for sicknesse of the Soule," written in the same allegorical style as is used in the *Booke of Prittie Conccites*, to be mentioned presently.

There was also an edition of *The Tresurie of hidden Secrets*, printed at London by Richard Iohnes, in 1596. This is earlier than any of the editions formerly quoted, the oldest in the British Museum having the date 1600.

This same year, 1596, there was printed at London by Thomas Purfoot, a small tract entitled: *A profitable booke declaring dyuers approoued remedies, to take out spotts and staines*. Like its contemporary: *A Booke of Secrets*, London, 1596,* it was translated from the Dutch, and contains portions of the *Kunstbüchlin* of 1537,† which were omitted from the other. These two volumes, therefore, supplement each other and between them contain a considerable part of the *Kunstbüchlin*. This edition is not in the British Museum, but there are there two editions dated respectively 1583 and 1605. For details of all three editions, reference may be made to the paper on *Some early Treatises*

* *Trans. Archæol. Soc. Glasgow* (N.S.), 1886, I. p. 216.

† *Ibid.*, 1883, II. p. 192.

on *Technological Chemistry*, read to the Philosophical Society of Glasgow, January 6, 1886.*

The oldest edition of Lupton's *Thousand Notable Things* that has as yet been quoted is in the British Museum, and has the date 1601. I have now got one without date, but belonging to the year 1595 or 1596, and printed at London, by I. Roberts for Edward White, and to be sold at the little North door of Paul's, at the sign of the Gun. The 1601 edition is a reprint.

All these tracts are printed in black letter, in small quarto, and are of the greatest rarity, considering that not one of them of the respective dates is contained in the British Museum. If to them be added the others enumerated on previous occasions, it will be obvious what a demand there must have been towards the close of the sixteenth century for books on practical arts and on natural history, a demand, it may be remarked, of which there is no recognition anywhere either in the history of the time, or of its literature.†

About the book which follows, I am not very clear. The oldest version I am acquainted with has this title :

The Booke of | prittie conceites, taken out | of Latin, Italian, French, Dutch | and
Englishe. | Good for them that loue | alwaies newe conceites. |
At London | Printed for Edward White, | dwelling at the little North
doore | of Paules Church at the | signe of the Gun. |

* *Proceedings*, Glasgow, 1887-88, XIX. pp. 126-159.

† Still another 1596 book, "wherein are discovered great secrets of Nature," may be mentioned. It is the revised edition of Monardus' work :

Ioyfvll Newes Out of theNew-found VVorldc. Whercin are declared, the rare and singuler vertues of diuers Herbs, Trees, Plantes, Oyles & Stones, with their applications, as well to the vse of Phisicke, as of Chirurgery : which being well applyed, bring such present remedie for all diseases, as may seeme altogether incredible : notwithstanding by practicc found out to be true. Also the portrature of the said Hearbs, verie aptly described : Englished by John Frampton Marchant. Newly corrected as by confrence with the olde copies may appeare. Wherivnto are added three other bookes treating of the Bezaar stone, the herb Escuerconera, the properties of Iron and Steele in Medicine, and the benefit of Snow. London, Printed by E. Allde, by the assigne of Bonham Norton. 1596.

Earlier editions were published in 1577 and 1580, and the Spanish in 1569, 1571 and 1574.

This book has no date. It contains 21 pages, printed in black letter. The title is from the British Museum copy (C 31. a. 11). It was in part reprinted as follows :

The | Book Of | Pretty Conceits : | Taken out of Latine, | French, Dutch, and English. | Very merry and very Plea- | sant, and good to be read of all | such as do delight in new and | merry Conceits. | Newly enlarged, corrected and amended. |

London, | Printed by James Flesher. |

16mo; signatures A 8, B 3. From there being a catchword: "Questions," on the verso of B 3, I suppose there must have been another leaf in signature B, containing the questions, or some of them, which are to be found in the previous edition. It is printed in black letter, and there is no date.

The title of the third copy is similar :

The | booke of pretty cōceits, | taken out of Latine, French, | Dutch and English. | Very merry and | very pleasant and g . . . | be read, of all | such as | new and merry . . . | Newly in . . .

This title is taken from a copy in the British Museum (1037. a. 48). It is a 16mo, printed in black letter. The title and first 16 leaves are imperfect and repaired. Signatures [A —] D 8, ff. 32 in all. No date.

This is an enlarged edition, containing more receipts and curiosities than the two preceding editions. The questions at the end for children, also, are more numerous, and answers or solutions to the problems are given in certain cases. It is very badly printed on poor paper, so that I have little doubt of its being the most recent version of the book.

This is such a silly production that the compiler acted wisely in allowing it to go on its way anonymously. It contains a few receipts that tend to a reasonable purpose but the majority are senseless. In the third version there are several conceits meant to be "swift and sententious," but the humour is too far fetched for the present day. Thus there is a receipt :

"To make a man to leaue great oathes. Drincke in the morning a good draught of the iuice of patience, with a good quantity of gratia Dei, and vse it euery day, and he will not sweare."

Even with less meaning and still less humour is another, which will show what a pretty thing man is, when he leaves off his wit. It is called :

A freendly medicine for the toothache, proued. Take a handfull of Idlenes, and as much of negligence, two handfull of ignoraunce, a little of imprudence, then take halfe a pinte of hastinesse, a pottle of presumption, a quarte of vncleanlynesse, and a gallon of extortion. Seeth all these in a pot of waste with the fire of prodigalitie, scumme them with the ladle of false chastitye and put it in a morter of periury, then take a pound of enuie, half an ounce of infidelitye, and as much of adulterye, two ounces of iniquitie, a quarter of a pound of Usurye, as muche of symonye and adulation, a pound of lechery, foure pounds of fornication. three pintes of slouthfulness. Mingle all these aforesaide with small wit in a vessell of vndiscretion, and then put it into the fore [*sic, for sore*] tooth, and vse it nine nightes and one daye, and thy tooth ache will weare away.

Of all medicines this is the best :

Quia sepe probatum est.

No doubt ; if one could get the ingredients and mingle them according to directions ; but what, one is constrained to ask, does it all mean, where is the moral, and why should such a bolus be a “charm for the toothache,” any more than “excellent for your broken shin,” or such other dulcet disease ?*

It is putting a strain on the definition, perhaps, to include the *Lectiones* of Johann Wolf, or Wolfius, among books of Secrets. Its name means “readings,” “excerpts,” or “gleanings,” but these are so choice, they have been selected with so much regard to their exceptional character and to the illustration of all that is rare and secret in history, both human and natural, so many of the books enumerated in these notes have been laid under contribution, that this seventeenth century miscellany may not be refused a place among the others. Besides, the work is almost, if not altogether unknown. It very rarely occurs for sale, it is neither a bibliographer’s nor a collector’s book, and although it is mentioned by both Watt and Graesse, it is like a thousand others similarly recorded,—a name and no more. Even Brunet has not condescended to say whether or not it is “more curious than useful.” Yet there are few books more delightful to lose oneself in. In two portentous folio volumes there is passed before the reader an endless array of other portents, prodigies, monsters, moving accidents, histories, biographies, catastrophes, everything strange, wonderful, terrible, incredible and impossible which the author could find in all literature of the previous sixteen centuries and which could be collected and arranged during the lifetime, incessantly em-

* Another similar fool’s bolt is in Bremer’s *Englishman’s Treasure*.

ployed, of himself and an amanuensis. Such a book can hardly be opened without advantage. A sort of museum of mis-births, showing what a number of good subjects have somehow gone wrong. And it is not description merely that the book gives us, but there are numerous woodcuts, boldly executed, which assist us in understanding the text. The title-page is decorated with a border, which is all explained afterwards. There is a portrait of the author, and there are pictures of strange events, such as the detection of Pope Joan, of towns overthrown by fire, of the different orders military and monkish, of monsters, like the Cracovian and Tiberian specimens, of angels good and evil, of portents, the prognostications of Paracelsus and a host of other marvels. The title, however, furnishes so good a summary of the contents that it may be reproduced just as it stands :

Iohan VVolffii I.C. Lectionvm Memorabilivm et Reconditarvm Centenarii XVI.
 Habet Hic Lector Doctorvm Ecclesiæ, Vatum, Politicorum, Philosophorum,
 Historicorum, aliorumq̄; sapientum & eruditorum pia, grauia, mira, arcana, &
 stupenda; iucunda simul & vtilia, dicta, scripta, atq; facta; Vaticinia item, vota,
 omina, mysteria, Hieroglyphica, miracula, visiones, antiquitates, monumenta,
 testimonia, exempla virtutū, vitiorum, abusuum; typos insuper, picturas, atq;
 imagines: Sed Et Ipsivs Coeli Ac Natvrae Horrenda Signa, Ostenta, Monstra,
 atq; Portenta: His interiuncti sunt quoq; omnes Sacri prophaniq̄; Ordines:
 Ex Qvibvs Omnibvs Cvm Præteriti Status in Ecclesia, Republica, & communi
 vita consideratio; tum impendentium euentuum, ac indies magis magisq̄; in-
 grauescentium malorum præ sagitio; sed & multorum abstrusorum hactenus
 desideratorum reuelatio ob oculos perspicuè ponitur.
 Lauingæ sumtibus Autoris impressit Leonhardus Rheinmichel Typogr. Palatinus,
 anno 1600.

This work forms two large closely-printed folio volumes, of which volume I. contains 36 pages of introductory matter, and 1012 pages of text; volume II. 20 preliminary pages, and 1074 of text. The work is not complete without the *Index*, compiled by Johann Jacob Linsius, called Hagendorn, and printed at Lauingen in 1608. This index is sometimes wanting.

The author of this big piece of work was born in 1537, studied at Strassburg, Bourges, Tübingen and Wittenberg, became a councillor of the Elector Palatine, was sent on embassies, travelled widely, passed a very active public life and carried through important and delicate affairs, and when he retired from service settled at Heilbronn where he died in 1600, in his 63rd year.

During the whole of his life he had laboured unremittingly at his book, and he gathered the material for it from an army of authors. This work, correctly described by Linsius as "of great and almost incredible labour," he toiled at to the last, determined evidently to finish it, and it was published the very year of his death. From the accounts* given of him, Wolfius must have been a man of great and varied accomplishments, of enormous erudition, of estimable character, entertaining both from reading and experience, of the most wonderful perseverance and rarest diligence and determination. He was remarkable even at a time when universal knowledge and reading were quite common.

To the books upon cosmetics and personal decoration can now be added one which I could just name formerly.† It is the work of Hugh Plat :

Delightes for Ladies, to adorne their Persons, Tables, closets, and distillatories :
With Beauties, banquets, perfumes and waters. *Reade, practise, and censure.*
At London, Printed by Peter Short. 1602.

This, which is in the British Museum (1035. a. 37), is a minute volume in 24mo, poorly printed, and with would-be ornamental borders round each page, some containing the initials E. R. There is no pagination, but signatures A to H in twelves, whereof H 12 is blank. It went through a very great number of reprints in the same size and style ; those of 1608, 1615, 1632, 1636, 1647, 1651, 1654, are to be found in the British Museum Catalogue. Lowndes mentions besides editions of 1609, 1611, 1617, 1628. I have examined the editions of 1602 and 1654, and have compared them with those of 1603 and 1640, which are not in the Museum, and are not mentioned by Lowndes. The former, dated 1603, corresponds with the edition of the previous year, having been also printed by Peter Short. The latter, of 1640, was printed at London, by Robert Young. It is a reproduction, almost page for page, of the 1602 or 1603 edition. Like them it has no pagination, but signatures

* The best account of Wolfius is given by Melchior Adam, *Vita Germanorum Jureconsultorum*, Haidelbergæ, 1620, pp. 341-347. There is a notice by Freher, *Theatrum Virorum Eruditione Clarorum*, Noribergæ, 1688, p. 951; and his name is mentioned by Jöcher, *Allgemeines Gelehrten-Lexicon*, Leipzig, 1751, IV. col. 2051.

† *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 259.

A to H in twelves, H 12 being blank ; the ornamentation round each page is different from that in the earlier copies. Of date 1647 there is a copy in the British Museum, but I have here another. It has the title repeated in the usual form, and it was printed at London by James Young, some relation probably of the Robert Young just mentioned. It is a 24mo and the collation is the same as that of the others. There is no pagination, but signatures A to H in twelves, H 12 being blank. The title-page is plain, and there is no ornamentation round the pages.

The 1654 edition (British Museum, 1037. a. 29 (2)) has the same title, but was printed at London by "R. W." It is a reprint like the preceding, but it has no borders round the pages. I presume all the other editions are more or less like these, but I have not examined them in detail.*

Bound up with the copies of 1647 and 1654, and intended apparently to go along with them, is another small treatise of the same character. It is entitled :

A Closet for Ladies and Gentlewomen, or, the Art of Preserving, Conserving, and Candyng. With the manner how to make divers kindes of Syrups, and all kinde of Banqueting-stuff: Also divers Sovereign-Medicines and Salves. Corrected, Amended, and much Enlarged, by adding a very useful Table thereunto.
London, Printed by R. W. 1654.

This book is divided into different sections : of preserves, of candyng, of pastes, of banqueting-conceits, of cordial waters, of conserves, of medicines and salves; and its contents show what a good housewife was expected to know two centuries ago. Many of the ideas and prescriptions were silly, some were wrong, but at any rate ladies and gentlewomen had plenty to do in looking after their houses, their kitchens, and their closets.

There is an edition of 1656 of the *Delights for Ladies* and the *Closet for Ladies*, but I have not seen a copy.

* There is a modern book of secrets on the same subject, and, as it is ascribed to a person who practised the lessons successfully, it may be mentioned :

L' Art de la beauté, ou Secret de la toilette des dames, suivi de petites instructions aux messieurs sur l' art de fasciner. Préface et notes par H. Emile Chevalier.
Paris, chez tous les libraires, 1862, in-12.

The reputed authoress is Lola Montès.

[*Note.*—The rest of this part, containing a notice of the books subsequent to 1602, will appear in the next volume.]



BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART VI
[CONCLUSION]

BY

JOHN FERGUSON, LL.D., F.S.A.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archaeological Society of Glasgow January 19, 1888]

GLASGOW
FRATHERN & FREEMAN, 111, W. G. NIELD STREET

1888

T. III

L XV

BIBLIOGRAPHICAL NOTES
ON
HISTORIES OF INVENTIONS
AND
BOOKS OF SECRETS

PART VI
[CONCLUSION]

BY

JOHN FERGUSON, LL.D., F.S.A.

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW

[Read to the Archæological Society of Glasgow January 19, 1888]

GLASGOW
STRATHERN & FREEMAN, 145 WEST NILE STREET
1890

(100 Copies Reprinted.)

BIBLIOGRAPHICAL NOTES ON HISTORIES OF INVENTIONS AND BOOKS OF SECRETS.

PART VI.

[CONCLUSION.*]

BY

JOHN FERGUSON, LL.D., F.S.A.,

PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

[*Read at a Meeting of the Society held on January 19th, 1888.*]

Several editions of Neri's *Art of Glass* have been already quoted.† Next to the original Italian of 1612, one of the rarest can now be adduced, the first edition, namely, of the English translation :

The Art of Glass, Wherein Are shown the ways to make and colour Glass, Pastes, Enamels, Lakes, and other Curiosities. Written in Italian by Antonio Neri, and Translated into English, with some Observations on the Author. Whereunto is added an account of the Glass Drops, made by the Royal Society, meeting at Gresham College.

London, Printed by A. W. for Octavian Pulleyn, at the Sign of the Rose in St. Pauls Church-yard. MDCLXII.

This is a small 8vo, and, like the original Italian, the translation has no illustrations like what exist in the later Latin versions. The translator was Christopher Merrett, whose name does not appear on the title-page, but whose initials are appended both to the dedication to the Hon. Robert Boyle, and to the address to the reader.

* For convenience of reference I have called this Part VI., although, strictly speaking, it is the second half of Part V., published in the preceding volume. Both parts were communicated to the Society at the same meeting, but the completed paper was of such a length that it was found necessary to print it in two sections. The present part contains the books subsequent to 1602.

† *Trans. Archæol. Soc. Glasgow*, 1883, II. pp. 194, 251 ; (N.S.), 1886, I. p. 225.

This is not only a rare but it is an instructive book as well, as it gives the reader insight into how the sciences in the seventeenth century depended on the use of glass. There is no concealment or mystery in the description. Merrett's notes are very interesting ; for he goes through the whole of contemporary physical science, and points out the many uses of glass, and its importance for optics, astronomy, physic, and other branches.

The account of the practical part, of the furnaces, pots, materials and reagents, of the methods for making different qualities and colours of glass, is very well done. Although glass-making was one of the most jealous of mysteries, and was one of the few mechanical arts in which a gentleman by birth could engage, there is no attempt at making trade secrets of the processes, as might have been anticipated. On the contrary, the descriptions are so clear and exact, that one can see that far more was known practically in the seventeenth century than one is inclined usually to believe, judging from the way in which most other books on science and the arts are expressed.

I happen to have got also a copy for description of the French translation.

Art de la Verrerie, De Neri, Merret et Kunckel. Auquel on a ajouté le Sol Sine Veste d' Orschall ; L'Helioscopium videndi sine veste solem Chymicum ; Le Sol Non Sine Veste ; Le Chapitre XI. du Flora Saturnizans de Henckel, Sur la Vitrification des Végétaux ; Un Mémoire sur la maniere de faire le Saffre ; Le Secret des vraies Porcelaines de la Chine & de Saxe. Ouvrages ou l'on trouvera la maniere de faire le Verre & le Crystal, d'y porter des Couleurs, d'imiter les Pierres Précieuses, de préparer & colorer les Emaux, de faire la Potasse, de Peindre sur le Verre, de préparer des Vernis, de composer des Couvertes pour les Fayances & Poteries, d'extraire la Couleur Pourpre de l'Or, de contrefaire les Rubis, de faire le Saffre, de faire & peindre les Porcelaines, &c. Traduits de l'Allemand, par M.D * * *.

A Paris, Chez Durand, . . . M.DCC.LII.

Avec Approbation et Privilege du Roi.

This is a bulky quarto, sumptuously printed, with handsome engravings of furnaces and apparatus, and it is undoubtedly the most complete of all the editions which I have seen. It contains not only the treatise of Neri, with the prefaces and notes of Merrett and of Kunckel (Geissler's version the editor does not seem to know), but also some treatises and extracts from other works bearing upon the manufacture of glass, enamel and porcelain, and, besides,

the tracts on the controversy about the part gold takes in making ruby glass, written by Orschal, Balduin and Kunckel. It forms, therefore, a kind of cyclopædia of the older writings on glass-making.

In marked contrast to Neri's book, as far as clearness and sense are concerned, is the singular performance which follows.

Trinvm Magicvm, Siue Secretorum Magicorum Opvs: Continens

1. De Magia Naturali, Artificiofa & Superstitiofa Difquisitiones axiomáticas.
2. Theatrum Naturæ, præter Curam Magneticam & veterum Sophorum Sigilla & Imagines Magicas, etiam Conclusiones Physicas, Elementales, Cœlestes & Infernales exhibens.
3. Oracula Zoroastris, & Myſteria Myſticæ philoſophiæ, Hebræorum, Chaldæorum, Ægyptiorum, Arabum, Perfarum, Græcorum, Orphicorum, Pythagoricorum & Latinorum.

Acceffere Nonnulla Secreta Secretorum & Mirabilia Mundi.

Editum à Cæsare Longino, Philos.

Francofvrti, Ex Officina Typographica Antonij Hummii. M.DC.XVI.

This is a little 24°, and is made up of several treatises and extracts. There is an edition of 1614* also in the British Museum [1035. a. 5 (3)] not differing in its contents from the present, and there is a later enlarged one of 1663, from which Freytag took his description. There can be no doubt about this being a collection of secrets. There is, first of all, a preface containing an explanation of the different kinds of magic, defending it against the accusation of being diabolic, and praising it for its religious character. The preface is followed by the contents, and then the tracts in order.

The first deals with divination, and witches, and magic, both natural and black—quite black, and it is ascribed to Marco Antonio Zimara, whose name will occur again in connection with the *Antrum magico-medicum*. No portion of this tract is contained in the first part of that work, though it may be reproduced, of course, in the second part, which I have not as yet seen.

* Francofvrti, Typis Wolffgangi Richteri, impensis Antonij Hummij. M.DC.XIV. 24°, pp. [24] 635.

Then comes a long extract from the second book of Baptista Porta's *Magia Naturalis*, consisting of a miscellany of curious secrets.

The second chief tract in the volume is another reprint of the *Liber Aggregationis*, by Albertus Magnus, of the virtues of plants, minerals, and animals, including the *De Mirabilibus Mundi* as usual. The demand for this book, as has been already observed,* was extraordinary, and is one of the wonders of literary history.

The third tract is entitled *Commentatio De Magnetica Curatione vulnerum, citra superstitionem, dolorem, & remedii applicationem. Authore R.G. M.D.* This is a reprint of a work which was published in 1609, and was afterwards printed in the *Theatrum Sympatheticum* at Nuremberg in 1662. It is one of the earliest tracts on the weapon-salve, and the author R.G. is Rudolphus Goclenius.

He was the son of the logician and philosopher of the same name, and was born at Wittenberg, August 22, 1572. His studies were pursued at Marburg, and after taking his degree, he went to Italy and Denmark. In 1608 he was appointed Professor of Physics at Marburg, of Medicine in 1611, of Mathematics in 1613. He was a laborious teacher, a diligent author, a voluminous writer, and a man of great acquirements, but with a leaning towards the secret sciences, alchemy, magic, divination, chiromancy, and so on. His doctor's thesis dealt with Paracelsus' methods in medicine, and the inaugural address which he delivered in 1608 on his receiving the chair was devoted to a defence of the weapon-salve. The following year he published an enlarged and corrected edition which was what was printed afterwards in the *Trinum Magicum* as well as in the *Theatrum Sympatheticum*. This is certainly one of his most notable productions. It landed him, however, in a controversy with a Jesuit, Roberti, who, quite as superstitious, credulous, and irrational in a different direction, had, on the whole, the best of it. But Goclenius stuck manfully by his doctrine and wrote replies to Roberti, though with no effective result. Nature had already passed sentence against the salve. At a later period the debate was revived and gave rise to a considerable amount of literature, some of which will fall to be considered under Digby, a little further on. Other works by Goclenius were on augury, astrology, chiro-

* *Trans. Archaeol. Soc. Glasgow*, (N.S.), 1890, II, p. 432.

mancy, and some were on medical topics. He died on the 3rd of March, 1621.*

The last tract in the *Trinum Magicum* professes to give the oracles of Zoroaster and the mystical philosophy of all the nations of antiquity. It does so—in aphorisms.

Freytag's† account of the book is notable in several details. In the first place the edition, which he describes, is dated 1663, and he does not seem to have known that there were editions fifty years before it. Then he confesses that he has failed to discover anything whatever about Cæsar Longinus, but thinks that it is a pseudonym. According to the editor of the *Kiranides*, a book of secrets which is referred to below, Cæsar Longinus was no other than Goclenius himself.‡ Next, with regard to the initials R.G., Freytag makes the following remark: *Libelli superstitiosi auctorem, aliis investigandum relinquimus*. This is very singular. It is almost impossible to believe that Freytag did not know that R.G. was Rudolphus Goclenius. On the other hand, if he knew who R.G. was, what was to prevent him stating the fact of the authorship? Is it an understood thing among his countrymen that Goclenius' name should never be mentioned?

The only difference between the early and late editions lies in the existence of a concluding tract which is not contained in the early editions, with the

* A very good account of Goclenius was contributed by Külb, to Ersch & Gruber's *Allgemeine Encyclopädie*, Leipzig, 1860, I. lxxi. pp. 365-67. But Germany has since got ashamed of him, for his name is omitted altogether from the *Allgemeine Deutsche Biographie*, Leipzig, 1879, vol. ix., although an extravagant amount of space is allotted to his father, Rudolphus Goclenius, the elder, who, even as a third rate philosopher, was in no respect superior to his son. Very different is the treatment by Desgenettes in the *Biographie Universelle*, Paris, 1857, xvii. pp. 6-7. There the son receives chief consideration, and the father is alluded to in a short paragraph at the end of the article, simply to prevent mistakes being made about the authorship of certain works. I do not know how the new German biographical dictionary can claim to be *allgemeine* when it deliberately omits such a man as Rudolph Göckel, the younger. That Germany has produced some cultivators of the occult sciences is a fact which may be deplored but cannot be forgotten.

† *Adparatus Litterarius*, Lipsiæ, 1755, iii. pp. 153—156.

‡ *Kirani Kiranides*, 1638, Præfatio Isagogica Editoris, f. 3 verso: "Prout in Trino Magico pag. 231 legere est, ubi opusculum illud Alberti maximè barbarum & nostrò magis ineptiens Cæsar Longinus Philos. Vel potius ipsemet Rodolphus Goclenius, Medicinæ & Artium Doctor Celeberrimus Francofurti M.DC.XVI. publicare non est veritus."

corresponding entry in the title-page. It is inscribed *de proprii cuiusque nati Daemonis inquisitione*, and Freytag loses his temper over it, and is at loss to say whether the author was a superstitious fool, or blasphemous knave, but seems to think that the author, by his own confession, felt conscious of being the latter. I do not know who the author was, but obviously the 1663 edition is one to possess.

Under the name of Marco Antonio Zimara, which has occurred in the preceding article, a book of secrets appeared at Franckfurt in 1625. Zimara* was born at San Pietro in Galatina, in the kingdom Naples, about 1640. He went to the University of Padua, where he graduated in 1507, and was appointed to a Chair of Philosophy, During the wars he returned to his native place, and, in 1522, he was sent by his countrymen to defend their rights before the King of Naples against the claims of Ferdinand Castriotto, who had obtained the lordship of Galatina. His abilities kept him at Naples where he taught theology. In 1525 he went back to Padua, and was reinstated in his Chair of Philosophy. He died there in 1532. He delivered lectures upon Aristotle and Averroes, and he commented, and subdivided, and vocabularized, and indexed, and dilucidated, until at the end of three years, the students, even of Padua, tired of him.† He was the author of a big work on Averroes, which was published at Venice in 1565, and of some others, besides the book of Secrets ascribed to him.

Its long title is as follows :

Marci Antonii Zimaræ, Philosophi, Antrvm Magico-Medicvm. In quo Arcanorvm Magico-Physicorvm, Sigillorum, Signaturarum & Imaginum Magicarum, secundum Dei nomina & Constellationes astrorum, cum Signatura Planetarum constitutarum, vt & Curationum Magneticarum & Characteristicarum ad omnes corporis humani affectus curandos: Thesavrvs Locvpletissimvs, nouus, reconditus. Cui Medicamenta Etiam Varia Chymica ex Mineralibus & Vegetabilibus confi-ciendi modus: Tractatvs item de rebus, quæ humano corpori eximiam & venustam formam inducunt: De variis etiam Metallorum & Minerarum præparationibus, & experimentis plurimis, quorum consideratio candidioris & Philosophici ingenii est, Tractatio subiungitur. Accessit Motus perpetui

* Weiss, in *Biographie Universelle*, Paris, no date, xlv. p. 524, gives a sketch of his life and works.

† *Averroës et l'Averroïsme*, 2^e Ed. Paris, 1861, p. 373, sqq. Renan's account here of Zimara is florid and lively, and, I suppose, is also accurate.

Mechanici absque vilo aquæ, vel ponderis adminiculo conficiendi documentum.
 Cum Elencho Capitum, Remediorumque quæ Antro hoc Magico continentur.
 Francofurti, Typis Ioannis Friderici Weisii, M.DC.XXXV.

In the year following, 1626, appeared the second part of the *Antrum* which, I regret to say, I have been unable to examine. Its title, however, which is given by a number of authorities, may be quoted to complete the account of the book.

Antri Magico-medici Pars II, in qua arcana naturæ, Sympathiæ & Antipathiæ rerum, in plantis &c. omniumque corporis humani morborum, in primis Podagræ, Hydropses, pestis, Epidemiæ, & Cancri exulcerati cura hermetica, specifica, characteristicæ, & medica continentur. Accesserunt portæ intelligentiarum & Canones hermetici de spiritu, anima, & corpore maioris & minoris mundi.
 Francofurti, 1626. in 8.

Of the first part of this book there is a translation into German. It also has a very lengthy contents-title, as it may be called :

Marci Antonii Zimare Magische Artzney-Kunst, Darinnen enthalten Ein gantz neuer überaus reicher Schatz verschiedener Magisch-Naturgemässer Geheimnisse, insonderheit aber von Sigillen: allerhand verborgenen Signaturen und Bildnussen: wie auch von allerley Magnetisch - und Characterischen Hülffs-Mitteln, Krafft derer alle und jede Gebrechen des Menschlichen Leibs zu curiren und zu heilen seynd. Darzu kommt über dieses noch

- I. Eine deutliche Handleitung, unterschiedliche rare Chymische Artzney-Mittel aus den Mineralien und Erdgewächsen zu präpariren.
- II. Ein besonders Tractätlein, handlend von vielen schönen Schmincken, Anstrichen und dergleichen Sachen, dardurch sich ein Mensch eine saubere, zarte, glatte unde schöne Haut machen kan,
- III. Eine Anweisung, die Metallen und Mineralien zu bereiten.

Alles mit gewissen Proben und Experimenten, wie es einem rechtschaffenen Philosopho zusteht, ausgezieret. Samt einer besondern Handkunst Ein Perpetuum Mobile oder sich immer bewegendes Ding, ohne Beyhülff des Wassers, oder Gewichts, zu machen. Auf vielfältiges Begehren aus dem lateinischen in das Teutsche übersetzt. Deme noch beygefüget, ein nützliches Tractätlein, wie der Mensch sich vor allen ansteckenden Kranckheiten durch seinen eignen Speichel präserviren kan.

Franckfurt, In Verlegung Joh. Ziegers, Buchhändlers, 1685.

This is an 8° volume, and, besides the printed title, it has an engraved title in three compartments. In one is represented a patient in bed taking a cup from a physician; in the second, a magician within a circle, is engaged in

conjurations; and, in the third, there is a man on his knees pouring water, apparently, from a jar upon the root of a tree.

I have not observed any translation of the second part into German.

What reason there is for crediting Zimara with this book I have not discovered. It was printed long after his death and after the works acknowledged to be his. There is nothing in the book itself pointing to him especially as the author, and if one may judge by the similarity of its contents to those of the general run of contemporary medical receipt books, I should be inclined to consider it altogether, or at any rate in large measure supposititious, ascribed by its author to Zimara to give the book a character, but neither more nor less than a compilation of the seventeenth century, though it may have a basis in some work of Zimara's which I have not seen,* or in an earlier edition.

From the author's address to the reader, one would infer him to have been alive when the volume was publishing and not to have flourished one hundred years anterior to it. For in it he speaks of "our most ornate printer, Weissius" making up his mind to bring out an edition in a handier size, with more elegant type, free from the faults which swarmed in the former edition, and enlarged with a bundle of the most excellent and most absolutely recondite secrets and experiments anywhere to be had. Surely Zimara, among all his secrets, had not that of long life or of rejuvenescence to enable him to write of "our book," as the author of the preface calls it, ninety-three years after he was reported dead?

Further, a number of the authorities quoted in the book were not known in 1532 when Zimara died. For while there are extracts from Albertus Magnus, Geber, Lully, all prior to Zimara, and from Paracelsus, his contemporary, there are also others from Levinus Lemnius whose book was not published till 1559, from Jacques Houlier or Hollerius, and from Baptista Porta, who all flourished subsequently to him. Even supposing, therefore, that part of

* Freytag (*Adparatvs Litterarivs*, Lipsiae, 1755, III. p. 134) quotes an edition of Aristototele's *Problemata*, Paris, Hieronymus de Marnef, 1558, 12°, ff. 141, which contains also the *Problemata* of Zimara. But from Freytag's account it does not seem to have anything to do with the *Antrum*. There is a French translation, Lyons, 1587, 12°. Another work by Zimara is in folio: *Quaestio de movente et moto*, Venice, 1505. His *Tabula et dilucidationes in dicta Aristotelis et Averrois* was published in folio at Venice, in 1565.

the book be taken from some work by Zimara, it is impossible that it, as a whole, could have been produced prior to the year 1532; a later hand must have been busy with this edition, and I have little doubt that its true date is a century later, that is, 1625.

Another proof of this, I think, is the publication of the work in two parts, in successive years. If it were printed from a work of Zimara's either in MS., or already in print, why was it not all printed at once? To this question an answer might be had if one could see the second part, for in all probability, it contains a preface which would throw some light on the history of the work. This, I may be able to get on a future occasion. In the meantime I suppose the compiler had not got the second part ready to print till 1626.

There is one matter about which a word of explanation by Zimara, or Goclenius, or the author of the *Antrum*, would have been welcome. In Goclenius' tract on the weapon-salve (*Trinum Magicum*, 1616, pp. 385-441, *Theatrum Sympatheticum*, Norimb. 1662, pp. 197-215) there occurs a section devoted to the signs and sigils of Hermes, Raphael, Chael, Solomon, etc. This is contained in full in the *Antrum magico-medicum*, 1625, pp. 175-210. Did Goclenius, in 1609, borrow this passage from a work by Zimara, or did the author of the *Antrum* plunder Goclenius and carry off the property to his Magic Cave? He admits as much in his preface. If the former, Goclenius must have had, after all, an earlier edition of the *Antrum* to refer to. If the latter, then the whole of that work cannot be by Zimara.

What was this earlier edition of the *Antrum*, described as running over with errors, which Goclenius may have consulted? No such book is mentioned in any catalogue or bibliography, and one would feel inclined to believe it a pure invention of the author, to give his book some degree of standing, and that it was just in keeping with the ascription of it to Zimara. But it may be as well to admit that there is a difficulty. Kestner,* who believes that the *Antrum* is spurious, quotes Arcudi's *Galatina letterata* for an edition of 1575-76, in 8°. If Arcudi be correct, it would still require to be shewn that Zimara was the author; and it would require to be proved that the edition of 1625-6 is a reprint of it. These are topics about which, in the absence of facts, discussion is useless. There is besides the prior question:

* *Medicinisches Gelehrten-Lexicon*, Jena, 1740, p. 934.

is Arcudi correct? I have at present no means of investigating these problems. The edition of 1625-26 is the only one referred to by all (except Renan) who speak of Zimara, as by Brucker,* Mercklin,† Vogt,‡ and Freytag,§ and its rarity is remarked on by these authorities.

A student of natural history and an author of marked importance was Johannes Jonstonus.|| He was born in 1603 at Sambter near Lissa in Poland, of Scotch parents of distinguished descent. He began his academical career at Ostorag, Beuthen, and Thorn; in 1622 he visited England and Scotland, and continued his studies at St. Andrews till 1625, when he returned to Poland. In 1628 he started on a visit to various Universities, including Franckfurt, Leipzig, Berlin, Franeker, Leyden, where he studied anatomy and botany, London, and Cambridge, where he continued the same pursuits. After some time he went back to his native country, and undertaking the charge of two youths, again went on a tour through Europe. This lasted from 1632, the year of his first published work, to 1636, and they travelled together through England, France, Holland, and Italy. On this journey he received the degree of M.D. at Leyden, September 15, 1632. Some years

* *Historia Critica Philosophiae*, Lipsiae, 1766, iv. p. 205, note z. Brucker speaks scoffingly of the work, but does not indicate any scepticism as to its authenticity, as I think he ought to have done. He says: "Fuit is [Zimara] Medicus et philosophus magni nominis, qui vero Aristotelis physiologiam ad magiam more seculi XVI transtulit. Cujus testis esse potest Antrum eius magico-medicum, liber rarissimus, in quo, vt habet titulus. . ." and then he quotes the title. Of the second part he says: "Eiusdem quoque furfuris pars altera est, in qua "Arcana naturæ. . ." and after giving the title he concludes: "ex hoc vngue cognosce leonem."

† *Lindenius renovatus*, Norimbergæ, 1686, p. 775.

‡ *Catalogvs . . . Librorum Rariorum*, Hamburgi, 1747, p. 735.

§ *Adparatus Litterarius*, Lipsiæ, 1755, III. p. 154.

|| There are numerous articles about Jonston in the biographical dictionaries. The following will afford fuller information about him: Moréri, *Dictionnaire Historique*, Paris, 1759, VI. p. 370. Nicéron, *Mémoires*, Paris, 1740, XLI. pp. 269-276. Külb and Theile in Ersch and Gruber's *Allgemeine Encyclopädie*, Leipzig, 1844, II. xxiii. pp. 7-8. Cuvier in *Biographie Universelle*, Paris, no date, XXI. pp. 147-48. Jöcher, *Allgemeines Gelehrten-Lexicon*, Leipzig, 1750, II. col. 1962-3. Jöcher confuses him with another John Jonston, Professor of Theology at St. Andrews, author of a chronology of the Kings of Scotland, dedicated to King James VI. Kestner, *Medicinisches Gelehrten-Lexicon*, Jena, 1740, p. 432. Mercklin, *Lindenius Renovatus*, Norimbergæ, 1686, p. 620. Hallam, *Introduction to the Literature of Europe*, London, 1854, III. p. 208.

later he had the offer of two professorships of medicine, but he would not exchange the complete liberty of private study and research for the duties of a public office, Instead whereof, he went to Silesia and settled on his estate, called Ziebendorf, near Liegnitz; where he resided till his death which occurred on June 8, 1675.

Jonston wrote treatises on medicine, history, literature, and other topics, but he is best known by his works on natural history, trees and plants, animals and minerals. I include him on account of his first published work, which happened to be on the marvels of nature.

An History of the Wonderful Things of Nature: Set forth in Ten severall Classes
. . . . written by Johannes Jonstonus. And now Rendred into English By
A Person of Quality.

London, Printed by John Streater, living in Well-Yard near the Hospitall of St.
Bartholomew's the Lesse, and are to be sold by the Booksellers of London, 1657.

This work was composed in 1630, when he was in London, and was published at Amsterdam in 1632,* under the title: *Thaumatographia Naturalis, in Classes decem divisa*, and several editions followed. The English translation, in a small folio volume, was made by John Rowland; and as it was not mentioned by any authority till quite recently, it is presumably of considerable rarity.†

The ten heads under which Jonston arranges his material are these: I. The Wonders of the Heavens; II. of the Elements; III. of Meteors; IV. of Minerals; V. of Plants; VI. of Birds; VII. of Four-footed Beasts; VIII. of Insects, and things wanting blood; IX. of Fishes; X. of Man.

This is a collection of natural wonders of all kinds, and it displays the author's erudition if it does no more. There is nothing from his own experience, but he has ransacked ancient and modern literature, for whatever marvels they could furnish. One cannot but be impressed by the different conception of natural science in the 17th century as is shown in this and similar compilations so often referred to already, from that which is entertained now. The older naturalist collected chiefly the exceptional things of

* Mercklin, *Lindenius Renovatus*, Norimbergæ, 1686, p. 620.

† It has been omitted by Lowndes, Hallam, Allibone, and even Watt, but I find that Hazlitt has quoted it, *Second Series of Bibliographical Collections and Notes*, London, 1882, p. 321.

nature (the more wonderful the better for his purpose), which he found on record, without question; or, if he questioned, without attempting to substantiate his opinion by a personal observation or experiment. The ordinary phenomena were passed by as of no importance, or as too familiar to deserve notice or to require explanation.

Though Jonston's merit, therefore, was that of a laborious compiler, as indeed were most of his contemporaries who wrote on natural history, and though he was unable to criticize, or prove thoroughly the statements of the writers whom he systematized, his books, as Cuvier says, can still be read with no small amount of pleasure; and they were the main authorities down to the time of Linnæus.

The career of Jonston resembles very closely that of Paschius, and some others who have been quoted. In wide academical training, in their travels, in their extraordinary erudition and encyclopædic acquirements, in their literary activity and productiveness, there is a sort of family resemblance. Jonston, however, kept himself more closely to natural history, zoology, and botany, while Paschius made a specialty of theology and philosophy. And now their very names are forgotten.

A book of genuine receipts was drawn up by a certain John Bate :

The Mysteryes of Natvre, and Art : contened in foure severall Tretises ; the first of water workes the second of Fyer workes, the third of Drawing, Colouring, Painting, and Engrauing, The fourth of divers Experiments, as wel serviceable as delightful : partly collected, and partly of the Authors Peculiar Practice, and Invention by J. B

Imprinted at London for Ralph Mab and are to be sold by Iohn Jackson and Francis Church at the Kingsarmes in Cheapeside 1634.

This is a small 4°. The general title-page is entirely engraved, and in a series of compartments are representations of the different works of art described in the text. There are also separate titles to the last three treatises. From the irregularities both in the signatures and pagination of this book, it is a little difficult to know when it is complete. The copy I have seen has the separate title-leaf, then signatures A to Q (wanting H 1, title to Part II.), q, R to T 3, Aa to Ff 3, all in fours. T 4 and Ff 4, wanting, are probably blank. There is a separate leaf with an illustration interpolated between C 3 and C 4. The pagination begins on B, and runs continuously to P 4 verso, p. 112, and

omitting Q and q, is resumed on R 1, p. 121, to T 3 verso, p. 142. Aa 1, the title of book IV. is not paged, but the verso of Aa 2 is numbered 150, which involves a blank of 4 pages between T 3 and Aa 1. The pagination after this goes on regularly to the end, p. 192.

There is a copy in the British Museum,* but I have not examined it.

The contents of this volume are quite sensible and practical. In the first part, under "Water Works," are included syphons, pumps, water clocks, and various fanciful tricks effected by the flow and pressure of water. "Fire Works," in the second part, are equivalent to modern pyrotechny, and it is quite surprising to see how some devices still in use were familiar to Bate. The third part is upon drawing and painting; and the fourth, entitled the "Booke of Extravagants," contains miscellaneous receipts and secrets, technical and medical.

A second edition of this book, "with many additions to every part," appeared during the following year, 1635, of which there is an imperfect copy in the British Museum.† It is of the second edition that the following collation is given by Lowndes,‡ which may be quoted, as according to it there are differences in the two issues.

Title, with engraved border; to the reader, a leaf, then complimentary verses and work A—Qq. in fours. Prefixed is a portrait (scarce) of the author, by G. Gifford, at p. 61 is a separate woodcut representing the horses at work to the engine for a Tyde-water, and at p. 65 another marked D, representing the wheel of an engine.

To judge by the signatures, this book must be a good deal larger than the other. The separate cuts also seem to be added, as well as the portrait. The suggestive word "scarce" signifies that the "Grangerites" plunder the portraits, and then cast the mutilated copies adrift.

There were other editions in 1638 and 1654, according to Lowndes. That of 1638 is nowhere described, but Hazlitt quotes the edition of 1654.§

*C. 27. h. 5.

† 1044. i. 1. I have not examined it.

‡ *Bibliographer's Manual*, ed. Bohn, London, 1865, I. p. 128.

§ *Collections and Notes*, London, 1876, p. 30.

The Mysteries of Nature and Art. In four severall Parts. . . . By John Bate. The third Edition with many Additions. Printed for Andrew Crooke 1654. 4°, B—Hh 2 in fours, and the title-page. The last 3 leaves are occupied by the publisher's advertisements. With a profusion of engravings.

If this be the third edition, can there have been one in 1638?

Of all the books of secrets, however, which I know of, there is no one more extraordinary than that entitled *Kirani Kiranides*. It was privately printed in Germany in 1638, and from the very first it has excited curiosity, and from its rarity has been hunted down by the lovers of out of the way books. This book is quite unknown in this country, and I am not aware that any description of it is extant in English. There are copies of the Latin and the translation in the British Museum. The following is a sketch of both. The Latin opens with a title :

Moderante Auxilio Redemptoris Supremi, Kirani Kiranides, Et ad eas Rhyakini Koronides. Qvorum ille In Qvaternario tam Librorum, qvàm Elementari, è totidem Lingvis, Primò de Gemmis XXIV. Herbis XXIV. Avibus XXIV. ac Piscibus XXIV. qvadrifariam semper, & ferè mixtim ad Tetrpharmacum constituendum agit; Inde Libro II. de Animalibus XL. Lib. III. de Avibus XLIV. sigillatim, & Lib. IV. de LXXIV. Piscibus iterum, Eorumq3 viribus medicamentosis: Hic verò studio pariter qvadrifido Ms. post semi-millennarium annorum ex inemendatissimo primùm edidit, 2. Notis interspersis subjunctisq3 illustravit, 3. Præfatione Isagogicâ ornavit, & 4. deniq3 Indicibus auxit.

Following this title is the preface of the editor in which he describes how he came to undertake the publishing of the work, and discusses the meaning of Kiranus and other obscure matters relating to the book itself. All this occupies 16 pages. Then there is another title-page :

Liber Phisico-Medicus Kiranidvm Kirani, *i.e.* Regis Persarum, Verè aureus gemmeusq3; Post id ferè annos nunc primùm è membranis Latinè editus cum Notis. Qvi multis adhuc seculis antè Syriacè, Arabicè & Græcè scriptus & versus extitit: Cùm autem reliqvæ translationes interciderint, Hæc semibarbara non omninò sepeienda, nec ita totum opusculum oblitterandum fuit. De quo quid sentiendum sit, reqviratur in C. Barthii Advers. & Lexico Harpocratonis,

Æra C. cIo Ioc xxxviii.

On the reverse of this title is a dedication. The work then begins with a preface by the old translator which contains an account of the book and the meaning of the name; after which the description of the secret virtues of beasts, birds, fishes, plants, and gems begins on p. 8, and ends on p. 104. Six pages of notes follow, and thereafter the last part about birds and fishes

pp. 111—159. Then there are more notes, and the book concludes with alphabetical indices of the Greek names and a Latin index of diseases and other affections, in all 23 pages. The book is a small 8°, printed in very inferior style on very inferior paper. Its attractions lie in its extraordinary contents, in its great rarity and in the difficulties connected with its history.

There appears to have been a second edition of this book. Morhof, in his account,* speaks of a Latin MS. given by Eleonora, Landgravine of Hesse, to Heinrich Ellenberger, which came into the hands of Rivinus who published it at Leipzig in 1637, an error, I suppose, for 1638. Then he adds: this edition I have not seen, but another published at Frankfurt in 1681, 12mo, which, according to the title, was the second edition. He follows this up with the contradictory remark: “Nulla illic prioris editionis mentio, quæ vel ignoratur, vel dissimulatur.” Except in this passage I have not seen any allusion to the later edition.

It is not a little remarkable that this book was translated into English, for, as a rule, books of the kind have never been in vogue in this country. The translator has concealed his name, but in a preface, partly original, partly translated, he has given a sketch of the book in which he tells about Ellenberger’s MS., says that the Latin was privately printed and distributed, and that after diligent search and some difficulty he procured a copy, and translated it. Even at that time therefore, in 1685, fifty years after its publication, it had become a scarce and much coveted book. If it were so scarce then, it has become much scarcer in the course of two hundred years more.

The following is the title of the translation :

The Magick of Kirani King of Persia, and of Harpocraton ; Containing the Magical and Medical Vertues of Stones, Herbs, Fishes, Beasts and Birds. A Work much sought for by the Learned, but seen by few ; said to have been in the Vatican Library in Rome ; but not to be found there, nor in all the Famous Libraries of the Empire. Now Published and Translated into English from a Copy found in a private Hand.

Printed in the Year MDCLXXXV.

The place and printer’s name are not given. It is a small 8°, and contains Title and Preface, pp. [16]; Epistle, pp. [8]; Text, pp. 156 ; Indexes, pp. [14]. This book is nearly as rare as the original Latin.

* *Polyhistor*, Lubecæ, 1714, I. cap. XI. p. 98.

As has just been remarked, there are few books surrounded with greater obscurity than this one. The meaning of the name of the work ; the date of its composition ; the name of the reputed author ; his nationality ; the original language of the treatise, Greek, Arabic, Syriac, Persian ; the existence and authenticity of the alleged Greek manuscripts ; whether these manuscripts represent the original work ; the Latin translator ; whether the Latin translation was really made from the Greek, or other language, or whether it is a recent compilation ; the Latin edition of 1638, whether it represents the original work, or merely the Latin compilation, if so be, these are different ; the editor of this edition, Andreas Rivinus, or some one else ; the value to be attached to his introduction, describing how the book came to be printed ; the place where and the person by whom the edition was printed ; in short, there is hardly a point connected with the work which is not in doubt ; which is not, at all events, open to discussion. The very existence of the English translation has been hesitatingly admitted, because it was only known from a catalogue : “ *Catalogus Bibliothecæ Harleianæ*, Tom. II. pag. 810 : Catalogue, auquel on ne doit se fier qu’ à bonnes enseignes.” It would take too much space here to attempt to answer all the questions that arise, and to give the reasons for preferring the view of one writer to that of another, it will suffice to refer to a minute investigation of the subject published by Prosper Marchand.* Even he, however, did not come to any definite conclusion, but left open for further enquiry the main question : Does the edition of 1638, however much it may be “une mauvaise Rhapsodie de superstitions, aussi ridicules qu’ impies,” in any way represent the supposed original treatise of Kiranus? He is unable to say.

Reinesius, who discussed the book with Rivinus, felt it almost a personal insult when under the title of *Kirani Kiranides* he got a volume of absurdities, instead of the work of so much renown. There is no evidence as to what Reinesius was entitled to expect, or whether he did well to be angry ; but supposing he had got the genuine work, was he sure that its contents would have been any more gratifying? Reinesius must have proceeded on the assumption that the 1638 edition, after he saw it, was spurious. But that is

* *Dictionnaire Historique*, La Haye, 1759, Tome II. pp. 1-8.

just a point on which no discussion or opinion has any bearing, until the matter of fact is ascertained. If there are Greek or other MSS. existing which can be proved genuine, then let it be ascertained by comparison whether the Latin edition agrees with them. That seems to be the only way of arriving at a conclusion.

For the present, however, I must confine my remarks to the book itself, leaving these questions of its history and authenticity and consideration of its contents for another occasion.*

Out of the unvisited recesses of English literature there emergeth ever and anon an unknown book of receipts, which may startle us no less by its title than by its contents. The following is a volume which is quite new to me, and which is omitted by the bibliographers. The title is worth reproducing in full :

Natura Exenterata : Or Nature Unbowelled By the most Exquisite Anatomizers of Her. Wherein are contained, Her choicest Secrets digested into Receipts, fitted for the Cure of all sorts of Infirmities, whether Internal or External, Acute or Chronical, that are Incident to the Body of Man. Collected and preserved by several Persons of Quality and great experience in the Art of Medicine, whose names are prefixed to the Book, Containing in the whole, One thousand seven hundred and twenty. Very necessary for such as regard their Owne Health, or that of their friends. *Valetudinem tuam cura diligenter.* VVhereunto are annexed, Many Rare, hitherto un-imparted Inventions, for Gentlemen, Ladies and others, in the Recreations of their different Employments. With an exact Alphabetical Table referring to the several Diseases, and their proper Cures.

London, Printed for, and are to be sold by H. Twisford at his shop in Vine Court Middle Temple, G. Bedell at the Middel Temple Gate Fleet street, and N. Ekins at the Gun neer the West-end of S. Pauls Church, 1655.

This is a small closely printed 8vo, and it is made up almost entirely of receipts in medicine and surgery. These have been collected from many sources, a list of all the people who have contributed information being given. One salve, good for bruises and wounds, called Gratia Dei, was revealed (it is said) unto King Alexander by an Angel. Many of the receipts are fanciful or superstitious; substances, chiefly plants and their extracts, were employed, the virtues of which were, of course, really unknown, and some of the substances have happily dropped out of use. To many of the

*[Fuller details were communicated subsequently to the British Archæological Association at the meeting in Glasgow, September 4, 1888.]

receipts is appended the magic word "Probatum," as in Lupton's, Mizaldus', and other collections. At the end are a few technical receipts.

The belief that the preservation of receipts by Persons of Quality conferred some additional virtue on them when healing had to be done is worth notice, as it indicates an attitude with regard to the practice of medicine which has been entirely altered by medicine having become somewhat scientific, or at least having to depend more upon the sciences for its progress.

Parallel with the chemical secrets published at London, in 1683,* Hartman edited another series by Sir Kenelm Digby :

Choice and Experimented Receipts In Physick and Chirurgery, As also Cordial and Distilled Waters and Spirits, Perfumes, and other Curiosities. Collected by the Honourable and truly Learned Sir Kenelm Digby Kt. Chancellour to her Majesty the Queen Mother. Translated out of several Languages by G. H.

London, Printed for the Author, 1668.

This is a small 8vo volume, and has a portrait of the author engraved by Cross. I have seen another copy of it which has the following clause inserted after the word "Author:" "and are to be sold by H. Brome at the Star in Litte-Britain (*sic*), 1668." There does not seem to have been any portrait in this copy.

The volume deals mainly with receipts and prescriptions for different common ailments, but incidentally there is a little practical chemistry in the preparation of the compounds employed. Among them the product of the destructive distillation of tobacco, which was used for the cure of ulcers, and which even by external application caused sickness, is described.

In 1675, "the second edition corrected and amended" was printed at London, "by Andrew Clark, for Henry Brome, at the Gun at the West-End of St. Pauls."

Under Digby's name there appeared certain books of secrets in French and German, but they are not translations of this collection of Hartman's, although they contain a good many of his "choice receipts." The French version was made by Jean Malbec de Tresfel, the royal privilege for seven years is dated 1668, but I do not know if the book first came out then. The copies I have seen are of a later time. The oldest of them is printed along

* *Trans. Archaeol. Soc. Glasgow*, 1883, II. p. 261.

with Digby's discourse on the powder of sympathy. It has no separate title-page, but is headed *Remedes Experimentez en Medicine et Chirurgie* and appended are the secrets about cosmetics—*pour la Conservation de la beauté des Dames*. It forms a small 12° volume, and it was printed at Utrecht, for Rudolphe van Zyll, in 1681.

A second copy is the following :

Remedes Souverains Et Secrets Experimentez De Monsieur le Chevalier Digby, Chancelier de la Reine d' Angleterre. Avec plusieurs autres Secrets & parfums curieux pour la conservation de la beauté des Dames.

A Paris, Chez Guillaume Cavalier, au quatrième Pillier de la grande Salle du Palais, au Palmier. M.DC.LXXXIV. Avec Privilege Dv Roy.

A third copy is in two volumes :

Nouveaux Secrets Expérimentez, pour conserver La Beauté Des Dames, et pour guérir plusieurs sortes de Maladies: Tirez des Mémoires de M. le Chevalier Digby, Chancelier de la Reine d'Angleterre. Avec son Discours touchant la guérison des Playes, par la Poudre de Sympathie. . . . Sixième édition, revûë, corrigée & augmentée d' un Volume.

A La Haye, Chez Etienne Foulque, Marchand Libraire, dans le Poote. M.DCC.

The first volume is a reprint of the preceding ; the second volume contains Digby's discourse on the powder of sympathy, and a number of other secrets partly chemical, partly medical, drawn from various sources, but whether or not gathered by Digby originally, I do not know. The secrets for preserving female beauty, which give the book its title, occupy only eight pages at the end of the first volume.

The German translation appeared under the title *Medicina Experimentalis Digbæana, das ist: Auszerlesene und bewährte Artzney-Mittel*. The translator's name is not given, but it is probably M. H. Hupka, the name of the person who translated the discourse on the powder of sympathy, mentioned below. The preface is dated Franckfurt, 1670, about which year the first edition was published. In 1672, at the same place, appeared the only edition of the book which I have seen, and which is stated to have been newly revised and enlarged with several approved experiments. The translation contains the bulk of the receipts given in the French version, but the arrangement is somewhat different, and there are a few alterations.

Digby was the author of a wine and cookery book also, entitled *The Closet Opened*, the third edition of which was printed at London in 1677. As it is

by Digby, and as it has a title similar to that of other books already mentioned, it may be allowed a place in the present notes. There is a portrait of Digby prefixed; it is a copy of that by Cross, but besides being of inferior execution, it alters his expression, and is lacking in dignity.

In the course of these *Notes* reference more than once has been made unavoidably to books about sympathy and antipathy,* but considering the amount of attention which it attracted it is perhaps necessary to take some notice, however brief, of the discourse on the powder of sympathy, one of the most famous of Digby's productions. It was, moreover, the revelation of a thorough-paced secret, a revelation, the course of which Digby traces in a very interesting way, and the necessity for which he deplores, though he finds himself unable to avoid it. But though the subject falls generally under the category of a medical or surgical secret, it is itself so very special, the discussions about it are so technical, the literature is so extensive and branches out so widely, departing from the main theme of the present notes, that if anything is to be said about it at all it will be more convenient to deal with it in a special supplement, in which not Digby's discourse alone but other works on the subject as well can be considered in detail. Digby's discourse was not the first on the subject by any means. The controversy between Goclenius and Roberti has already been referred to. Another controversy arose about Digby's time between Papin and Cattier, and a third was carried on with the usual amicable interchange of insults between Parson Foster and no less notable a man than Robert Fludd. It was all in the air therefore, and Digby was too susceptible a person to avoid catching the infection. So far as I can ascertain, the Discourse was first delivered in French to "a solemn assembly" at Montpellier, "by way of Oration, and taken in short writing upon the place as 'twas uttered." The privilege is dated December 21st, 1657, the printing was finished February 15th, 1658, and the book was published at Paris. It was translated into English by R. White, and the edition printed at London in 1658 for R. Lowndes, "at the White Lion and T. Davies at the Bible in S. Pauls Church-Yard, over against the little North Door," is called the second, and is corrected and augmented. This would seem to imply that

* Among these are the work by Mizaldus on the Harmony of things; Irvine's *Medicina Magnetica*; Goclenius on the Weapon-salve, and others.

there was an earlier first edition, but I have not met with a copy of it, nor have I seen a reference to it. I am disposed to think that the French edition may have been reckoned the first, and that the English version was viewed as the second. In 1660 another edition was called for, it was styled the third, and the fourth appeared in 1664.

The French version was repeatedly printed; it is included in the editions printed at Utrecht in 1681 and at the Hague in 1700, and there are others which I have not had the opportunity of examining.

It was translated into German by M. H. Hupka, with the title:

Eröffnung unterschiedlicher Heimlichkeiten der Natur, . . . und vornemlich von einem wunderbaren Geheimnüz in Heilungen der Wunden, ohne Berührung, vermög desz Vitrioli, Durch die Sympathiam, Discurszweise gehalten in einer Hochansehnlichen Versammlung zu Montpelier in Franckreich, Durch den Hochwolgebornen Herrn Grafen, Herrn Kenelm Digby, . . .

The first edition, I believe, appeared in 1658, that is, immediately after the French was published. Of the second edition I do not know the date, but the third was printed at Franckfurt in 1664, the fourth in 1668, and the fifth in 1700. Lowndes' account of this book of Digby's is very imperfect, whereas Watt runs to the other extreme, and quotes editions, such as that of 1644 in folio, the existence of which is not only not vouched for, but is impossible. The consideration of these matters, however, must be left over for more minute inquiry than can be bestowed on it at present.*

Reference was made before to a little book of technical receipts called: *Art's Treasury of Rarities: and Curious Inventions*, published at London by G. Conyers.† There was another book covering pretty much the same ground, also published by him, having this title:

Art's Master-Piece: Or, a Companion for the Ingenious of either Sex. In Two Parts. . . . To which are added many curiosities and rare Secrets, known to few, and highly Profitable and Pleasant. The Third Edition. With Additions by C. K.

London, Printed for G. Conyers at the Golden Ring, and J. Sprint at the Blue Bell, both in Little-Britain. Price One Shilling.

* [A paper on the subject was afterwards read to the Society on March 15, 1888, under the title: *Bibliographical Notes on the Magnetic Cure of Wounds, the Weapon Salve, the Powder of Sympathy and Sympathetic Cures.*]

† *Trans. Archæol. Soc. Glasgow*, 1883, II. p. 196.

This, like *Art's Treasury* and Conyer's edition of Lupton's *Thousand Notable Things*, is a shabby little 12mo, printed on coarse paper in as cheap a style as possible, and decorated with a poor woodcut frontispiece of an artist at work on a portrait. A serious blemish in these books, which has been already noticed, is the absence of a date, but judging from appearances I presume they were printed towards the close of the seventeenth or during the early years of the eighteenth century.

It contains painting in oil, gilding, japanning, varnishing; dyeing and staining of ivory, bone, hair, leather, wool, silk, linen; removing of spots and stains; perfuming; medical and surgical receipts; inks; making of glass, enamel, artificial gems; painting on glass; gilding on metals; taking casts in wax, plaster, metals; and numerous other secrets.

At the end of *Art's Master-Piece* is a catalogue of books published by Conyers. They all profess to be of the same practical kind, such as: *A Treatise of Japanning and Varnishing*, by Mr. George Parker, price 8s.; *The Whole Art of Dying*, translated from the German, price 3s. 6d.; *A Rich Cabinet of Modern Curiosities*,* by John White, price 1s.; *Arts Treasury*, second edition, price 1s., the edition mentioned above being the fifth; *The Art and Mystery of Wine-Coopers*, a discourse delivered to the Royal Society in Gresham College, price 6d.; *The Young Sportsman's Instructor*, by G. M.; *The Compleat Bee-Master*, by G. Worlidge, price 6d.; *The Anglers Sure Guide*, by R. H., price 2s. 6d.; *The Compleat Fisher*, by J. S., price 6d.† I have not seen any of these, but they are worth quoting as illustrations of the practical books of two centuries ago, and for the sake of comparison with similiar books on the same subjects now, like those of the *Badminton Library*, *British Manufacturing Industries*, Weale's Series, and others.

* Lupton's book is also called *A Rich Cabinet of Select Curiosities and Rarities* in Conyers' edition of it (*Trans. Archæol. Soc. Glasgow*, (N.S.), 1888, I. p. 313).

† According to Pickering's *Bibliotheca Piscatoria*, London, 1836, R. II. was Robert Howlett, and the date of the book is 1706. The same authority quotes five editions of *The Compleat Fisher*, by J. S., the earliest dated 1696, and the fifth 1725. See, however, a fuller account in T. Westwood and T. Satchell's *Bibliotheca Piscatoria*, London, 1883, p. 110, for "R. II.," and p. 181 for "J. S."

An amplification of *Art's Treasury of Rarities*, just mentioned, appeared in 1735, and in the socialistic comprehensiveness of its title it forms an appropriate sequel and parallel to the *Ingenious Gentlewoman and Servant-Maids Delightfull Companion*, formerly described.* The title is as follows :

The Gentleman's Companion : or, Tradesman's Delight. Containing, The Mystery of Dying in all its Branches. The Manner of preparing Colours. The Method of cleaning and taking out Stains from Silks, . . . The Art of Drawing, . . . Likewise the Quality of Natural and Artificial Metals. . . . The Great Mr. Boyle's Method of Writing in such a Manner as cannot be discovered without the Help of Fire, Water, &c. . . . To which is added, The Method of curing and preserving all Sorts of Wines . . .

London : Printed for J. Stone, at Bedford-Row, near Gray's-Inn; . . . 1735.
(Price 2s. 6d.)

This is a small 12mo volume of 257 pages, besides a table of contents. The book is divided into three parts, of which part I. and two or three chapters of part II. are reprinted from *Art's Treasury*. The remainder of part II. and the whole of part III. are added. Part III. contains cookery and physick receipts, at the end of which is "the Vermin-Killer," taken in large measure from Cornelius Agrippa, it is said.

This book is not in Lowndes' or in Watt's bibliography, but I have encountered two copies within a few days of each other. It is difficult to say, therefore, whether it is rare or common, but I imagine that, if they knew it these compilers did not think it worth mention. Like most books of its class, it has little practical interest for to-day, but, when taken along with the others, it helps in tracing the history of the arts, as well as illustrating the older literature.

It has happened unintentionally—by familiarity rather than neglect—that two works, which, in virtue of their date and merits, should have been mentioned much earlier, have been overlooked until now. A few words may be added about them.

If there is one book more than another which ought to have been included at first among those that contain "secrets," it is surely that by Cornelius

* *Trans. Archæol. Soc. Glasgow*, (N.S.), 1888, I. p. 321.

Agrippa, *De Occulta Philosophia*, which actually does deal with the most recondite secrets of creation; with sympathy and antipathy; the elements; nature and man; soul and spirit; the hidden power of letters and numbers; in short, with all the wonderful lore of magic.

It was composed by Agrippa in 1510, when he was aged 24, but it was not printed till 1531. In that year the first book only came out at Antwerp; the printing was stopped, and the whole work in three books was not published till 1533. It then passed through several editions, and was translated into English, and published in 1651. A spurious fourth book appeared in 1565, and this also was published in English in 1655 and 1665. All these books have become very rare, and they possess now a good deal of bibliographical value. Thus there are two, if not more, issues dated 1533; uniform in style and size, but differing essentially in details of printing.

The second work is also by Cornelius Agrippa, and is his still more famous: *De incertitudine et vanitate Scientiarum et Artium Declamatio Invectiva*, and this, in its turn, can claim and ought to have had a place among the histories. For, acknowledging that it is a criticism, a wholesale and destructive criticism, of all the arts and sciences, it is unwittingly, but unavoidably, a historical essay. Agrippa could not well display and illustrate the emptiness and instability of art and man's device, without at the same time tracing their evolution and progress.

The history of this book is even more remarkable. It was first published in a small quarto volume at Antwerp in 1530 (the year before the Occult Philosophy), a volume of such rarity that just 150 years ago its very existence was denied. It at once attracted attention; it was so racy, so full of knowledge and hard knocks; it voiced so boldly what other people were only thinking about, that it was reprinted a dozen times in a year or two, and for a full century it was one of the most widely circulated books in European literature. It passed through a multitude of editions; it was translated into Dutch, English, French, German, and Italian, and there were several editions of these. The earliest editions are the best and most complete. Later on the book was deprived of much of its interest by having the telling passages ruthlessly excised, so that it was reduced to a colourless discourse on the vanity of human pursuits, without point or practical bearing.

It would take too much space to enter upon the bibliography of this work at present. It was very carefully examined by Clément* last century, and a fresh investigation, full of information, has been recently published by Auguste Prost.† But admirable as is the care these writers have taken with it, there are certain matters which they have missed, just in consequence of what everyone who has meddled with the subject has experienced, the difficulty, namely—it might almost be said the impossibility—of getting copies of all the earliest editions. Some of these details have confronted me in connection with certain undescribed editions, but consideration of them must be postponed in the meantime. ‡

Nor with the literary merits of the Declamation is it the function of the present paper to deal. It must not be forgotten, however, that it was the last great work of the author's life, not an academical or literary flourish, but an expression of his disappointment and dissatisfaction with all his acquirements and learning and experience. For a man who had run through the whole round of knowledge, and had led a busy, restless, adventurous life, to announce, in so many words, that *ignorance is bliss*, was to startle his contemporaries out of their self-complacency. And even after the lapse of three centuries it is not devoid of some applicability, and it survives as one of the few books of its time that can be read with interest and with profit. Perhaps it is because it deals with the essence rather than with the accidents of human endeavour.

Agrippa, however, was not the only one who discoursed anew upon the old text of the Preacher. Before Agrippa's book appeared, a certain Italian, Perisaulus Faustinus by name, wrote and published a Latin poem, *De Triumpho Stultitiæ*. It too reiterates the same doctrine that man, from cradle to grave, is given over wholly to vanity. The author's own labours afford perhaps as good proof as any of the truth of his thesis. They have all been thrown away, for the little volume which he penned on vanity can hardly be got. It is

* *Bibliothèque Curieuse*, Göttingen, 1750, I. pp. 81-93.

† *Corneille Agrippa Sa Vie et ses Œuvres*, Paris, 1881-82. T. II. Notes xxix. and xxxiv.

‡ [The subject was discussed at length in a paper read subsequently to the Society of Antiquaries, London, April 19, 1888, entitled: "Bibliographical Notes on the early editions of the *De Incertitudine et Vanitate Scientiarum* and the *De Occulta Philosophia* of Cornelius Agrippa."]

now extremely rare and only some eight or nine copies are upon record. The descriptions given of these exhibit divergences which cannot be explained or reconciled without a comparison of several copies. This, however, is most difficult of accomplishment for the copies known are widely scattered and some of them have disappeared from public view altogether. So we must be content to know that in 1524 Faustinus asked :

Nonne vides? si tecum habitas, ni desipis, esse
Omne hominis vanum studium, vanosque labores?

Then, a hundred and fifty years after Agrippa, appeared the *Reflections on Learning* by Thomas Baker, the antiquarian, the laborious and conscientious scholar, the non-juror, the *socius ejectus* and historian of St. John's College, Cambridge, who not only repeated the old cry, but went a stage further and asserted practically that Agrippa's demonstration was as vain as the arts themselves, and was calculated only for schoolboys, evidently a depth of worthlessness below which it was impossible to sink. Poor Agrippa! how the irony of fate seems to have pursued him. The work which was wrung out of him by the bitterness of his life reckoned a mere rhetorical exercise, and a very second-rate performance even as that. Agrippa's own presage of what his critics *would* say was very true; but he never expected having schoolboys hurled at him, at least he does not specify them. Not even Catilinet, the Dominican, had such a battery to unmask and discharge.

But Baker took a less comprehensive view of the arts than Agrippa did, and his book is narrow in its range. For him the only arts were those called polite or liberal: the arts taught by Gregorius Reisch; the history of which was written by Zacharias Lilius; the symbols of which were used by Grafton for his device in Polydore Vergil's history. Of physical science he had no knowledge, and he was too wrapt up in the questions of the hour, political and ecclesiastical, and his own interest in them, to have foreseen its destiny, even had it been pointed out to him: that as the exponent of a material universe with human beings, as material objects in it, it would come to denominate the rest of knowledge. For him the study of material things was not learning or philosophy, but mechanic art. He did not realize what an amount of imagination, insight, knowledge, reflection, experience, contrivance, manipulative dexterity, is required even for the despised mechanic arts,

He did not consider what skill and thought were expended in making the paper, and the ink, and the type, and the printing press, and in getting all these to work together properly, before the book by Thomas Baker could be produced, which was to teach and preach the worthlessness of the polite arts.

After all, however, Baker helped on general progress in a way he did not anticipate. The proof of the insufficiency of mere learning and philosophy, was one of the means of impelling dissatisfied minds to look for more fruitful subjects of study; subjects which, while supplying endless problems for the exercise of all the mental faculties, alone issue in practical results which affect the existence and well-being of mankind. But that was not in Baker's intention: it was rather to limit research by setting up in its place a creed which he believed in wholly as incontrovertible and final. If such a creed could be, it would soon become stagnant and dead, and then from it new forms must issue. So it turned out. Enquiry cannot be stopped by a creed. Physical science has grown immensely and old beliefs have had also to alter.

It requires an effort to view the arts and learning as Baker saw them, and to comprehend what was to be gained by depreciating them. Religious belief was not elevated by lowering the value of the truth which had been brought to light by generations of workers in every department. Arts and learning were not perfect then; they are not perfect now. It is the certainty of coming a little nearer perfection, which is the whole and sole stimulus to work at them. Baker's attitude is not merely weak and indefensible, and inferior to that of Wotton and Temple whom he takes to task for their commendation of learning, but it is self-destructive. It is unnecessary, however, to say that the lapse of time has so entirely changed the position of the arts and sciences, that it is almost impossible to discuss the propositions which Baker lays down, and the proof is that the *Reflections on Learning*, once a popular work, containing much learning and illustration, is now absolutely and irrevocably forgotten. Agrippa's book, however, still lives, both for its own sake and for the matter it contains. But then it is the work of an undoubted genius whereas the other is but a temporary piece of erudition on a temporary question on a passing difficulty, by an able man, but one of circumscribed view.

Nobody has said when Baker's book was first published. It must have been in the last years of the seventeenth century. The third edition is the only one I have seen.

Reflections Upon Learning, Wherein is shewn the Insufficiency Thereof, in its several Particulars. In order to evince the Usefulness and Necessity, of Revelation. The Third Edition Corrected. By a Gentleman.

London, Printed for A. Bosvile, at the Dial against St. Dunstan's Church in Fleet-street. MDCC.

It is an 8vo, of unattractive exterior. It is said to have passed through eight editions; the only dates which I have seen quoted are 1708, 1710, 1756, which last is said to be the best. It was also translated into French, and published at Paris in 1714, with the title *Traité De L'Incertitude Des Sciences, Traduit de l'Anglois*. This is a nicer book than the English one.

The preface contains a review of previous writers on the same topic, and, besides Agrippa, there are mentioned Picus Mirandulanus, Ludovicus Vives, an anonymous French work, Wotton and Temple. Not one of these, however, satisfied Baker: Picus was as much out of date as the Aristotelian philosophy he attacked; Vives confined himself to Philology, and was very defective in Philosophy; the French tract was more of a sermon than a treatise on science; Wotton and Temple were too much taken up with the beauties of learning to discover its faults, so this invidious task Baker accordingly set himself to accomplish. One can but regret that the only book he published should have been so futile and evanescent a one on so unworthy a theme.

At this point I stop in the enumeration of these histories and books of secrets, for I cannot say that the topic admits of no further treatment, or that the end is reached, or that the material is exhausted even now, though it is not so abundant as when I began. With longer acquaintance, the field seems to widen, and the subject becomes more seductive and suggestive. There is always some old book coming forward which I did not know before, one compiled at a different time, or by a different hand, guided by another idea, appealing to other readers. There are books of secrets of nature and art still remaining which I have refrained from mentioning, because, while I know the titles, the books themselves I have failed entirely to see. These, obviously, must be the rarest of all. Some of them may yet be met

with, but the prospect is too uncertain to speculate about. They might have been described at second hand, but this would have been a violation of the rule that I have thought it proper to adhere to throughout this whole research : not to attempt the description of a book which I have not seen and examined. A few quoted descriptions do occur, but they have been inserted only for comparison, or for some special reason. These may be accepted as accurate until comparison with the volumes reveals mistakes, though I have no occasion to suppose that there are any.

Of the treatises already described, there are also editions which I have quoted, but have passed by without further remark. The reason is the same as before: I have not had the opportunity of inspecting them. Such has been the case, for example, with the history of Polydore Vergil, with the secrets of Albertus Magnus, Alexis, Lupton, Baptista Porta, and very many others, of which there are plenty of editions I have not seen. The description of any one of these, fully and carefully gone into, would be pretty sure to yield something of value to the bibliographer. Some of the copies too must themselves be very interesting. In a few supplementary parts I have attempted to work out more fully the bibliography of a special book, or subject, or author, and the results are sufficiently encouraging to induce me to try something similar in one or two instances more. In certain cases, of course, when the various editions are but verbatim reprints, nothing will be added to our knowledge of the original; but in others there may be a preface, or imprint, or variation, which will lighten up a biographical, historical, literary, chronological or bibliographical doubt, and the light may be reflected off to some other perhaps more obscure topic. One thing, however, experience has shewn me is quite certain, that, without such an examination of the actual books it is in the highest degree rash and unsafe to pass an opinion on an original edition, or a reprint, or a later editon of a book, or to argue about what it is like, or what it contains, or to dogmatise about the date of an edition. There is no subject in which it is easier to go astray than bibliography, and especially so, when one seeks to arrive at an opinion with the guidance of another's description, rather than of the books themselves. It is hard, if not impossible, to be uniformly accurate in one's account of such objects as books, and of their history. I am quite prepared to be told,

indeed I know already, that there are both errors and misprints in the present series of papers. I may yet have an opportunity of correcting these, but no one who has tried to make his descriptions exact but will be the first to lament the fungus-like celerity with which errors spring up on the least relaxation of attention and comparison.

The amount of literature upon "secrets" is quite considerable, greater than I had any notion of. As a rule the natural history secrets are the least true to nature. The medical secrets are not always to boast of; there are plenty of superstitious cures. The technical receipts are on the whole the most rational, although they are always empirical; no reason can be, or at least is given, for the substances employed, or the operations executed, and it sometimes happens that a receipt is little else than nonsense. I suspect, too, that the authors of the receipt books were not necessarily the best informed or most skilful operators. The minutiae of practice in the technical arts formed trade or guild secrets, which only the initiated possessed, and the book writers may never have known them at all, or may not have dared to reveal them. Judged by results (the favourite method at present), the operations were ever superior to the described methods. Tradition, long practice, empirical skill slowly acquired and some sort of insight engendered of these, supplied to a certain extent the want of science and even led on to improvements. These were better teachers than the receipt books which have been enumerated, and which, after all, do not cast a bright light on the arts during the last two or three centuries. At all events, they cannot be considered as on a level with the remains of the arts, for while the books are defective, in some departments the workmen two or three centuries ago were not behind the present time. The arts have, of course, been always at very different stages of development. Those which depend on the workman's dexterity, as the art of the potter, or of the goldsmith, have naturally been more advanced than those which depend on scientific knowledge. The latter, indeed, had either not been invented at all, or were less perfect, in proportion to the amount of science required.

The branch of literature represented in these notes is quite unknown to the historians and is disregarded by them. The bibliographers too have passed it by, and I am not aware that it has ever been brought systematically together. Undoubtedly these books would be useless for the workmen and the students

of this present year, just as the newest books that would have been consulted five and twenty years ago, are about as antiquated to-day as if they were 250 or 2500 years old. Nor would they repay perusal for their own sake. But they have a value of which it is impossible to deprive them : they alone can tell us what were the teachings in science and the arts at the time they were in vogue, if that is ever worth knowing. They must be consulted by all who would know how the world has progressed ; in a survey of medicine, science, the arts, and culture generally in the sixteenth, seventeenth, and eighteenth centuries, they are indispensable and invaluable. Even a writer of historical fiction who wishes his story to have the verisimilitude of the time he portrays, would do well to study in these and like books the beliefs or the notions about natural phenomena, or the credulities of the people he may have to bring upon his stage, for he could not invent them. It would be as difficult to imagine the natural science of a past age, as it is to know the science of the present without devoted study. I do not think that any one now could write a book like Fenton's, or Johnson's, or the *Kiranides*, if he were to try.

This literature, however, has been neglected. Endless are the volumes written on the metaphysics and theology of the middle ages, on the quarrels and wars and politics and crimes of that time, but there are but meagre accounts of the men who fabricated the gold and silver and iron and wood work, who moulded the pottery, who built the cathedrals, who invented the coloured glass, who discovered the paints and the colours, the metals and their compounds, who devised the tools and wove the tapestry, who produced the wines, who dressed the parchment and made the paper, who bound the books, who forged the weapons and decorated the armour, who wrote the manuscripts and illuminated them. Of all the arts, printing, certainly one of the greatest of them, is the only one which has had proper attention bestowed on it, and has had its history and productions duly investigated.

All these wonderful arts, and the positive gains from nature which they involve, were won in a rude age, as we are apt complacently to regard it, and yet they were the marks of its civilization fully as much as its scholastic philosophy. If proof be wanted, one may consider with what of past civilization the present is most in touch, most appreciates, feels to be truest and most real. In this more civilized age, with incalculably wider and profounder

knowledge of all kinds, with a more thoroughgoing search for truth and reality, with centuries more of accumulated experience, is it scholastic theology and metaphysics, or is it mediæval art that appeals most strongly to the most cultured and civilized races? How many would care even to *see* the bulky folios of Aquinas, and Scotus, and Albertus, and Cardan, much less read them, compared with those who not merely look at but study profoundly, and even try to imitate the metal work, the pictures, the dress, the armour, the historical relics, the majolica or Palissy ware?

It is by the neglect of these subjects that literature and thought and education, and indirectly, even technology have become so one-sided. Education has been conducted as if all that mankind ought to care for was fiction and poetry, metaphysical speculation and theological disputation, the study of mere opinion, and the language expressing it. These could have been but the pastimes of the people, or the serious occupation of a few as at present, but not the life-long absorbing pursuits of the workers of the population, the producers, the agriculturists, the handicraftsmen, the artists. The survival of the mediæval standards for measuring knowledge and education by is most remarkable. After serving their time when nothing else was to be had, a time when men had to go through a sore struggle, mental, religious, political, physical, to arrive at freedom of thought, investigation and belief, these old-fashioned instruments are still retained when there is so much of new available.

The persistent empiricism of the arts even comes down from these earlier times when there was no learning but that of books, when science had not begun and nature was ignored, when rule-of-thumb knowledge was all that the workman had to go by. The "practical man" still thinks that empiricism is the best guide, perhaps he would say the only one, and keeps off scientific insight as intrusive. He cannot, however, do so always; science sooner or later finds its way into the recesses of his methods, and either confirms them and simplifies them if true, or amends them or obliterates them if based on insufficient principles.

Hitherto the advance has been comparatively slow, because science itself has been of slow growth, and its efforts are so restrained and demand such a minute and exact knowledge that it takes long to appeal direct to the mass of man-

kind. A step or two may be made in a generation, and they who have made it are seldom able to see the new prospect opened up thereby. But the rate of progress has been accelerated of late years by the larger body of workers engaged in investigation, by the interest forced even on the most unobservant by the application of discovery to comfort and convenience, perhaps specially by the fact that is being borne in upon the more thoughtful that neglect of nature and natural laws is a defect in education, and is certain to be followed by incapacity to deal with nature in all the practical requirements of life.

The consideration, however, of this topic would result in a dissertation upon so called "Technical Education," and upon the relations of science and practice. That is not the theme of the series of papers now concluded, but it naturally grows out of them, and at various points throughout, the same questions have obtruded themselves upon our notice. Unavoidably in a survey of the literature one contrasts the past and present, one seeks for an explanation of the difference between the two and asks why there is apparently such a vast chasm between the books on natural history, on technical art, on medical practice of the previous times and the books now. The explanation must be sought for in the history of the arts, and sciences, and medicine, and natural history respectively, and then it will be found that there is no chasm to bridge over, but that by slow steps the old has yielded age after age, little by little to the new, that the progress has never ceased, though at any one point it may be almost imperceptible, that truth has been arrived at only after much labour by many workers, and that it is only when stages of knowledge separated by centuries are compared with each other that the advance is perceived, the assured advance which is the encouragement for the searcher ever to go on.

INDEX

TO

BIBLIOGRAPHICAL NOTES ON HISTORIES OF INVENTIONS AND BOOKS OF SECRETS.

*PARTS I.-VI., READ TO THE ARCHAEOLOGICAL
SOCIETY OF GLASGOW, 1882-1888.*

BY

JOHN FERGUSON, LL.D., F.S.A. LOND. AND SCOT.,
REGIUS PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

GLASGOW :

Printed at the University Press by
ROBERT MACLEHOSE & CO.

1898.

T. III

Lxv

INDEX

TO

BIBLIOGRAPHICAL NOTES ON HISTORIES OF INVENTIONS AND BOOKS OF SECRETS.

*PARTS I.-VI., READ TO THE ARCHAEOLOGICAL
SOCIETY OF GLASGOW, 1882-1888.*

BY

JOHN FERGUSON, LL.D., F.S.A. LOND. AND SCOT.,
REGIUS PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF GLASGOW.

GLASGOW:

Printed at the University Press by
ROBERT MACLEHOSE & CO.

1898.

NOTE.

To the original issue of the first and second parts (1882-83, 8vo) there was added an alphabetical list of the books described in them, my belief at the time being that the research was ended. How erroneous that belief was, later experience showed me. The subsequent parts were not indexed as they appeared, because I kept in view the compilation of a table like the present when the series was presumably finished. This was accomplished at the end of the sixth part, and although since then I have printed some supplements, it is convenient to regard the first six parts as complete in themselves. Anyhow, whether they be or not, they are not of much use without an index of some kind, and this I have here endeavoured to supply.

It is arranged alphabetically by authors, the titles are made as brief as possible, and short collations are given. Only the books which I have examined are included, so that the index does not exhaust the editions mentioned in the text.

While the index has been drawn up to suit the author's reprints, the following table will enable anyone to refer to the corresponding page in the *Transactions* of the Society :

Part I.	<i>Transactions</i> , 8vo.	Vol. II., pp. 180-197.
Part II.	„	„ 229-272.
Part III.	„ New Series, 4to.	I., 188-227.
Part IV.	„	„ 301-336.
Part V.	„	„ 419-460.
Part VI.	„	II., 1-33.

To which must be added: *Account of a copy of the first edition of the "Speculum Majus" of Vincent de Beauvais, 1473*; Supplement to Part II. printed in the New Series, Vol. I. pp. 165-187.

The only confusion that may arise is in connection with the reprints of Parts I. and II. in quarto which I had made in 1896. To save trouble I have given references to both the 8vo and 4to issues, distinguishing the latter by an asterisk.

J. F.

GLASGOW, *February* 20, 1898.

INDEX.

AALBERT.

De Wonderbare Geheymen, van den Grootc en klyne Aalbert, in 3
Dcelen. Gedrukt te Parys, In't Jahr 100,000. Svo, pp. 48 [46] 3-44.

II. 38 ; II* 23

ACCOMPLISHED (THE) Ladies' Rich Closet of Rarities.

See SHIRLEY (JOHN).

AGRIPPA (HENRICUS CORNELIUS).

De Incertitudine et Vanitate Scientiarum et Artium... Declamatio.
Antuerpiæ, 1530. Small 4to, ff. [7], [163]. VI. 26

De Occulta Philosophia Libri Tres. Antuerpiæ, 1531. 4to, ff. [14,
including Portraits of Agrippa and his wife and 1 blank leaf], [76]. VI. 26

This, the first edition, contains the first book only.

De Occulta Philosophia Libri Tres. 1533. Small folio, pp. [12],
CCCLXII. [2 blank?]. VI. 26

Three Books of Occult Philosophy. Translated by J. F. London, 1651.
4to, pp. [28, including Portrait and the encomium] 583, [1 blank], [12]. VI. 26

Fourth Book of Occult Philosophy. Translated by Robert Turner.
London, 1655. 4to, pp. [16] 217, 1 blank. Portrait. VI. 26

Fourth Book of Occult Philosophy. Translated by Robert Turner.
London, 1665. 4to, pp. [14] 206. VI. 26

ALBERT (L') MODERNE, ou Nouveaux Secrets éprouvés, et licites, Recueillis
d'après les Découvertes les plus récentes. A Paris, 1768. 12mo,
pp. xxiv. 430 [2]. IV. 31

L'Albert Moderne.... Seconde édition. Augmentée de plusieurs Secrets
nouveaux. Paris, 1769. 12mo, pp. viij. 439 [1, 18]. IV. 32

10 L'Albert Moderne.... Seconde édition. Corrigée & augmentée de
plusieurs Secrets nouveaux. Basle, 1770. 12mo, pp. vi. 291 [14,
1 blank]. IV. 32

ALBERTUS MAGNUS.

Liber Aggregationis.

See LONGINUS (CÆSAR).

Liber Aggregationis. Without place, date, and printer's name. About 1470. 4to, ff. 43, 27 lines. V. 12

Liber Aggregationis. Londini, Machlinia. No date, about 1483. Small 4to, ff. [42]. III. 24

Liber Aggregationis. Without date (1483?), place (Cologne?), and printer's name (Barthol. de Winckel?). 8vo, ff. 12, 34 lines. V. 15

The Secrets of Albertvs Magnvs. Of the vertues of Hearbs, Stones, and certaine Beasts. Whereunto (*sic*) is ... added, a short discourse of the seven Planets, goucrning the Natiuities of Children. Also a Booke ... of the maruellous things of the World... (London). 1617. 16mo, ff. [64]. III. 29

De Secretis Mulierum et Virorū. No place, date, or printer. Small 4to, ff. [33]. 1, probably blank, wanting. Hain, *555. III. 23

[De Secretis Mulierum]. Without date, place, or printer. 4to, ff. 44. 33 lines. III. 24

Secreta mulierum ab alberto magno cōposita. Without date [1480?], place (Cologne?), and printer's name (Heinrich Quentell). 4to, ff. 33. 1, blank (?) wanting. V. 14

De Secretis Mulierum. No place, 1428 (*sic*). Small 4to, ff. [56]. Hain, *563. III. 23

De Secretis Mulierum. [London, Machlinia, about 1483.] Small 4to, ff. [54]. III. 24

20 Secreta Mulierū et virorū ab alberto magno nuperrime composita. No place. 1526. 16mo, ff. 36. III. 24

Alberti Cognomento Magni Libellus qui inscribitur de Formatione hominis in vtero Materno, vel vt notiori Titulo, Secreta Mulierum. Antuerpiæ. 1538. 8vo, ff. 55 [1 blank]. III. 25

Ein Newer Albertus Magnus. Franckfurdt, Weygandt Han. No date. 4to, ff. xlviii. [2]. III. 28

Alberti Cognomento Magni de Secretis Mulierum, Libellus scholijs auctus, & à mendis repurgatus. Lvgdvni, 1566. 32mo, ff. 216. The Text has 17 lines to the page ; the Commentary, 22 lines to the page. III. 26

Alberti Cognomento Magni de Secretis Mulierum, Libellus, scholijs auctis, & à mendis repurgatus. Lvgdvni, 1566. 32mo, ff. 216. Text : 16 lines to the page ; Commentary : 23 lines to the page. III. 26

- Alberti Magni, de Secretis Mvliervm libellus, ... Adiecimur & ob materiae similitudinem Michælis Scoti philosophi, De secretis naturæ opusculum. Lvgdvni, 1598. 16mo, ff. 381 [9, 2 blank]. III. 26
- De Secretis Mulierum. Argentorati, 1607. 16mo, pp. 390 [9, 1 blank]. III. 27
- Traetatus Henrici de Saxonia, Alberti Magni Discipvli, De Secretis Mvlierum. Francofvrti, 1615. 12mo, pp. 411. III. 27
- De Secretis Mvliervm. Argentorati, 1615. 16mo, pp. 390 [9, 1 blank]. V. 16
- De Secretis Mvliervm. Argentorati, 1625. 16mo, pp. 342 [no Index]. V. 16
- 30 Albertvs Magnvs de Secretis Mvliervm. Item De Virtutibus Herbarum Lapidum et Animalium. Amstelodami, 1643. 24mo. Engraved Title. Pp. 366 [10]. III. 27
- De Secretis Mulierum. Amstelodami, 1648. 12mo, pp. 358 [13, 1]. III. 27
- De Secretis Mulierum. Amstelodami, 1655. 24mo, pp. 358 [14]. III. 27
- De Secretis Mulierum. Amstelodami, 1662. 12mo, pp. 358 [12, 2]. III. 27
- De Secretis Mulierum. Amstelodami, 1665. 24mo, pp. 329 [4, 5]. III. 27
- De Secretis Mulierum. Amstelodami, 1669. 24mo, pp. 329 [6, 1]. III. 27
- De Secretis Mulierum. Amstelodami, 1669. 24mo, pp. 329 [6, 1]. Second issue. III. 27
- Von den Geheimnüssen derer Weiber wie auch von den tugenden derer Kräuter, ... und den wunderwercken der Welt. Nürnberg, 1678-1701. 12mo, pp. [2] 550 [23, 1 blank]. III. 29
- De Secretis Mulierum. Amstelodami, 1702. 24mo, pp. 329 [6, 1]. III. 27
- De Secretis Mulierum; or, The Mysteries of Human Generation Fully Revealed. Written in Latin by Albertvs Magnvs. Faithfully rendered into English (*sic*)...by, the late, John Quiney, M.D. London, 1725. (Price 2s.) 8vo, pp. viii. [4] 108. III. 30
- 40 Von den Geheimnüssen derer Weiber. Nürnberg, 1725. 12mo, pp. 550 [23, 1]. Engraved title. III. 29
- Les admirables Secrets d'Albert le Grand. A Cologne, 1722. 12mo, pp. xx. 284. Engraved title and four plates. I. 6, note; I* 9, note; III. 28
- Les admirables Secrets d'Albert le Grand. A Lion, 1729. 12mo, pp. [22] 306 [6]. Engraved title and four plates. III. 28
- Les admirables Secrets d'Albert le Grand. Lyon, 6518. 12mo, pp. xij. 237. Frontispiece, three woodcuts. III. 28
- See SECRETS (LES) des Dames.

ALBERTUS MAGNUS DER ANDERE.

See FISCHER (EBERHARD HEINRICH).

ALBERTUS PARVUS.

Secrets. Lion, 1729. 12mo, pp. [12] 252. 10 engravings. IV. 35

Secrets Merveilleux de la magie naturelle & cabalistique du Petit
Albert. A Lion, 1743. 12mo, pp. [12] 252. 10 engravings.
I. 16; I* 19; IV. 35

Secrets. Lion, 1803. 12mo, pp. 186 [6]. 10 engravings. IV. 35

See GRANDE (LA) et Veritable Science Cabalistique.

ALCHIMIA.

See KERTZENMACHER (PETRUS).

ALESSIO.

De' Secreti del Reverendo Donno Alessio Piemontese, Prima parte,
diuisa in sei libri... Ora in questa seconda editione dall' autor
medesimo tutta ricorretta, & migliorata. Et aggivntovi nel fine
d'ogni libro molti bellissimi secreti nuoui. In Venetia, 1557.
4to, pp. [24] 191 [1]. III. 35

De' Secreti. Prima parte, diuisa in sei libri. Seconda Editione. In
Lyone, 1558. 16mo, pp. 392 [30]. II. 48; II* 33

De' Secreti. In Venetia, Presso Giorgio de' Caualli, 1568. 8vo,
Prima Parte, ff. 155 [11, 2 blank]; Seconda Parte, ff. 76 [8];
Parte Terza, ff. 48 [4]. I. 11; I* 13; III. 35

50 D. Alexii Pedemontani De Secretis Libri Sex Mira quadam Rervm
Varietate Referti ex Italico in latinum sermonē nunc primum
translati. Per Ioannem Iacobum weckerum, medicum. Basileae,
ANNO .M .D .LIX. 8vo, pp. [16] 279 [1 blank, 22]. V. 30

De Secretis libri, mira quadam rerum varietate vtilitateq'; referti.
Basileae, 1560. 8vo, pp. [14, 2 blank] 354 [29, 3 blank].
II. 41; II* 26; V. 31

De Secretis libri septem, a Ioan. Iacobo Veckero ... ex Italico sermone
in Latinum conuersi, & multis bonis secretis aucti. Basileae, 1563.
8vo, pp. [14, 2 blank] 480 [46, 2 blank]. II. 41; II* 26; V. 32

Kunstbuch ... vō mancherley nutzlichen vnnnd bewerten Secreten oder
Künsten, ... in Teutsch gebracht durch Doctor Hans Jacob Wecker.
Basel, 1570. 8vo, pp. [48] 462 [1, 1 blank]. III. 38; V. 33

- Kunstbuch ... inn Teutsch gebracht, durch Doctor Hanss Jacob Wecker.
Without place (Basel?), 1573. Svo, pp. [48] 462. Der ander Theil :
[8] 274 [22]. II. 41 ; II* 26 ; III. 38 ; V. 33
- See WECKER (J. J.).
- Les Secrets. Paris, 1573. 16mo, pp. 911. III. 39
- Les Secrets. Paris, 1576. 16mo, pp. 911 [81]. III. 39
- Les Secrets ... Reueu, corrigé & augmenté d'une infinité de rares Secrets.
Derniere Edition. A Roven, 1614. 16mo, pp. 911 [81]. V. 34
- Les Secrets ... reueu, et augmenté. Roven, 1637. Svo, pp. 675 [70, 1]. III. 39
- The Secretes of the Reverende Maister Alexis of Piemovnt. Containyng
excellente remedies against diuers diseases, ... with the manner
to make distilations, ... fusions and meltynges. Translated out of
Frenche into English, by Wylliam Warde. ... London, ... 1558.
4to, ff. [7, 1 blank] 123 [2] [10]. III. 36
- 60 The Secretes. London, 1559. 4to, ff. [7, 1 blank] 122 [10]. III. 36
- The secretes. London, Rouland Hall for Nycolas England, 1562. 4to,
ff. [6] 122 [10]. III. 36
- The seconde part of the secretes. London, Jhon Kyngston for Nicholas
Englande, 1560. 4to, pp. [4] 161 [15]. III. 36
- The second parte of the Secretes. London, Rovland Hall for Nicholas
Englande, 1563. 4to, ff. [2] 79 [7]. III. 36
- The thyrdc and last parte of the Secretes. London, Roulande Hall, for
Nycholas Englande, 1562. 4to, ff. 79 [9]. III. 37
- The thyrdc and last parte of the Secretes. London, Henry Denham,
for John Wyght, 1566. 4to, ff. [1] 75 [9]. III. 37
- A verye excellent and profitable Booke containing sixe hundred foure
score and odde experienced Medicines, ... practysed of the expert
and Reucrend Mayster Alexis, which he termeth the fourth ...
booke of his secretes.... Translated out of Italian into Englishe by
Richard Androsc. London, 1569. 4to, pp. [32] 56, 64, 56. III. 37
- The Secretes. ... Newlie corrected and amended. London, 1580, 1578.
4to. Part I., 1580, ff. [6] 117 [11]. Part II., no date [1580], ff.
75 [5]. Part III., 1578, ff. [1] 75 [9]. III. 37
- The Secrets of the rcuerend Maister Alexis of Piemont, containing
excellēt remedies against diuerse diseases, wounds, and other
accidents, with the maner to make Distillations, Parfumcs, Con-
fitures, Dyings, Colours, Fusions, and Meltings. A worke well
aproued, verie necessaric for cueric man. Newly corrected and

amended, and also somewhat enlarged in certain places, which wanted in the first edition. Translated out of French into English by William Ward. Imprinted at London by Peter Short, for Thomas Wight, 1595. Small 4to, ff. [6] 348, [14].

I. 11, note; I* 13, note; III. 38

The book is in four parts, with title pages—included in the pagination—to each. The first three bear the name of Ward. The fourth is as follows:

The fourth parte of the Secretes of Alexis of Piemont, containing sixe hundred four score and od experimented medieins, pertaining to physiek and ehirurgery, long time practised by him and in his latter daies published to an vniuersall benefit, hauing vntill that time reserued it only to himselfe, as a most priuat and pretious Iewel. Translated out of Italian into English, by Richard Androse.

ALMELOVEEN (THEODOR JANSSON VAN).

Inventa Nov-Antiqua. Amstelædami, M.DC.LXXXIV. Svo, pp. [32] 249 [7]; [6] 85.

V. 7

ANDREE or ANDRIESEN (SYMON).

70 Kunst Boeck. Nyeulijck wten Alchemistischen gront vergadert. Aemstelredam, 1549, printed 1551. Small Svo, ff. [1] liij [vi]. I. 13; I* 15

The last leaf contains the emblem of Cornelis Karelzen, for whom the book was printed: a hooded falcon perched on the branch of a withered tree, with the monogram of C. K. in the lower right hand corner. On the verso of the title is the picture of a man working in an apothecary's shop.

Een schoon Tractaet van sommige werkingen der Alchemistische dinghen, ... Noch een schoon Tractaet Boecxken, inholdende van alderley verwen te maecken. Gedruckt toe Reess. 1581. Small Svo, ff. xxvij. [4]. I. 13; I* 16

Een schoon Tractaet van sommige werkinghen der Alchimistische dinghen, ... Noch een schoon Konst-boec, seer nutlick voor allen Werc-lieden. Ghedruckt t'Amstelredam. 1600. Small Svo, ff. xxvj; xxvj; [4]. I. 13; I* 16

See BOOKE (A) OF SECRETS. See ETTLICHE KÜNSTE. See KERTZENMACHER (PETRUS). See KUNST-BÜCHLEIN. See PROFITABLE (A) BOOKE. See RECHTER GEBRAUCH D'ALCHIMEL.

ARISTOTLE.

Aristotle's Secret of Secrets contracted.... Formerly Translated out of the original Greek into Latin, and divers other Languages; and ... is now faithfully rendered into English. London, 1702. 16mo, pp. VIII. 87.

IV. 27

ART'S MASTER-PIECE: Or a Companion for the Ingenious of either sex.... To which are added many curiosities and rare Secrets. The Third Edition, with Additions by C. K. London, no date. 12mo, pp. [1-6] 7-152 [4].

VI. 23

ART'S TREASURY of Rarities.

See WHITE (JOHN).

AUDA (DOMENICO).

Breve Compendio di Maravigliosi Secreti Approuati con felice successo nelle Indispositioni Corporali... Con vn Trattato per conseruarsi in sanità. In Venetia, M.DC.XCII. 12mo, pp. [20] 316.

IV. 24

See QUINTI.

BACON (ROGER).

Epistola de secretis operibus naturæ et artis, et de nullitate magiæ.

I. 6 ; I* 8

BAKER (THOMAS).

Reflections Upon Learning, Wherein is shewn The Insufficiency Thercof, in its several Particulars. ... The Third Edition corrected. By a Gentleman. London, MDCC. 8vo, pp. [16] 240.

VI. 30

Traité de l'Incertitude des Sciences. Paris, 1714. 12mo, pp. [23, 1 blank] 347 [4, 1 blank].

VI. 30

BATE (JOHN).

The Mysteries of Natvrc, and Art : contained in foure severall Tretises : ... partly collected, and partly of the Authors Peculiar Practice, and Invention, by J. B.... London, 1634. 4to, pp. [10] 1-45 [1 blank] ; [2] 53-112 [2] 121-192. 9 Plates. Wants title to Part II.

VI. 14

80 The Mysteries of Natvre, and Art... The second edition ; with many additions unto every part. London, 1635. 4to, pp. [12 including Portrait and engraved Title] 288 [16]. 2 Plates in Part I.

VI. 15

The Mysteries of Natvre, and Art... The third Edition with many Additions. London, 1654. 4to, pp. [9] 6-221 [9], Advertisements [6].

VI. 15

BECKMANN (JOHANN).

Beyträge zur Geschichte der Erfindungen. Leipzig, 1786-1805. 5 vols. Small 8vo.

I. 2, note ; I* 4, note

A History of Inventions and Discoveries, Translated by William Johnston. Second Edition. London, 1814. Four Volumes, 8vo :—I. pp. xvi. 488 ; II. pp. iv. 419 ; III. pp. iv. 461 ; IV. pp. iv. 682.

III. 17

A concise history of Ancient Institutions, Inventions, and Discoveries in science and mechanic art ; abridged and translated from The Beyträge ... of ... Beckmann.... In two volumes. London, 1823. 8vo. I. pp. xvi. 404 ; II. pp. xi. 401 [1].

I. 2, note ; I* 4, note

A history of inventions, discoveries and origius... Translated ... by William Johnston. Fourth Edition ... by William Francis ... and J. W. Griffith. London, 1846. 8vo. I. pp. xxiii. 518 ; II. pp. xii. 548. 2 portraits.

I. 2, note ; I* 4, note

BIRINGUCCIO (VANOCCHIO).

- De la Pirotechnia. Venetia, 1540. Small 4to, ff. [8] 168. I. 10; I* 12
- Pirotechnia. Li diece Libri della Pirotechnia. Vinegia, 1550. Small 4to, ff. [8] 167 [1]. I. 10, note; I* 13, note
- Pirotechnia. Venetia, 1559. 8vo, ff. 345 [7]. I. 10; I* 13
- La Pyrotechnie. Paris, 1572. Small 4to, ff. [4] 168. I. 10; I* 13

BLANCOURT (FRANÇOIS HAUDIQUER DE).

See HAUDIQUER.

- 90 BOOKE (THE) OF PRITTE CONCEITES, taken out of Latin, Italian, French, Dutch, and Englishe. Good for them that loue alwaies newe conceites. At London, Printed for Edward White, dwelling at the little North doore of Paules Church at the signe of the Gun. 16mo, pp. 21. V. 39
- The Book of Pretty Conceits.... Newly enlarged, corrected & amended. London, Printed by James Flesher. 16mo, ff. [12], f. 12 is wanting. V. 40
- The booke of pretty cōceits. 16mo, ff. [32]. An imperfect copy. V. 40

BOOKE (A) OF SECRETS: Shewing diuers waies to make and prepare all sorts of Inke and Colours: as Blacke ... and other Colours. Also to write with Gold and Siluer,... and to graue with strong Water in Steele and Iron.... Translated out of Dutch into English, by W. P.

Hereunto is annexed a little Treatise, intituled, Instructions for ordering of Wines: Shewing how to make Wine,... with other instructions for the preservation of the same. Written first in Italian, and now newly translated into English by W. P. London, 1596. 4to, ff. 19. III. 31

See ANDREE OF ANDRIESEN (SYMON).

BREMER (WILLIAM).

- The Englishmans Treasure: with the true Anatomie of Mans bodie: Compiled by ... Thomas Vicary. Whereunto are annexed many secretes appertaining to Chirurgerie,... Also the rare treasure of the English Bathes, Written by William Turner,... Gathered ... by William Bremer.... London, 1596. 4to, pp. [10] 110. V. 38
- The Englishman's Treasvre. With the True Anatomie of Mans Body: Compiled by ... Thomas Vicary,... Whereunto are annexed many secretes appertaining to Chirurgerie.... Also the rare Treasure of the English Bathes: Written by William Turner.... Gathered ... by William Bremer.... And now seuenthly augmented... by G. E.... London, 1696 (1626). 4to, pp. [8] 224 [8]. IV. 8; V. 38

BREMNER (DAVID).

The Industries of Scotland. Edinburgh, 1869. 8vo, pp. [2] viii. 535.

I. 3, note; I* 5, note

BRUNSWICK (JHEROM).

The Vertuose boke of Distyllacyon of the waters of all maner of Herbes,
... fyrst made ... by ... Master Jherom bruyuswyke. London, 1527.

Small folio, ff. [4, 32, 100].

V. 25, note

CANEFARIO (PIETRO MARIA).

De Atramentis cvivscvnqve generis. Venetiis, 1619. Small 4to, pp. [24]
368.

I. 16; I* 18

De Atramentis cujuscunqve generis. Londini, 1660. Small 4to, pp. [16]
568.

I. 16; I* 18

CARAMUELIUS (ASPASIUS).

See SCHOTT (CASPAR).

CASTRILLO (HERNANDO).

100 Historia y Magia Natural, o Ciencia de Filosofia Oevlta. Madrid, 1692.
4to, pp. [12] 342 [16].

IV. 25

C'EST LE SECRET DE LHISTOIRE NATURELLE eōtenant les merueilles et choses
memorables du monde. Paris, 1527. Small 4to, ff. [xii.] cv.

V. 23

CHAMBERS (EPHRAIM).

Cyclopædia: or a Universal Dictionary... The whole intended as a
Course of antient and modern Learning. Second Edition. London,
M.DCC.XXXVIII. 2 Vols. Folio.

IV. 29

Cyclopædia. The Fourth Edition corrected and amended. 2 Vols.
London, 1741. Supplement. 2 Vols. London, 1753. Folio.

IV. 30

Cyclopædia ... with the Supplement and Modern Improvements incor-
porated in one Alphabet. In 4 vols. London, 1786-89.

IV. 30

CHAPPUYS OR CHAPUIS (GABRIEL).

See FIORAVANTI (LEONARDO). See SARDI (ALESSANDRO).

CLOSET (A) FOR LADIES AND GENTLEWOMEN, or, the Art of Preserving, Conserv-
ing, and Candyng... Also divers souveraign Medicines and Salves
for sundry Diseases. London, 1647. 24mo, ff. [96].

V. 44

A Closet for Ladies and Gentlewomen, or the Art of Preserving, Con-
serving, and Candyng... Also divers Sovereign Medicines and
Salves... London, 1654. 24mo, ff. [12] 84.

V. 44

CLOSSET OF PHYSICAL SECRETS.

See ELIZABETH.

COONATUS (GILBERTUS).

Sec II. 32; II* 17.

COMBINAISONS ÉGYPTIENNES, ou Recueil de Morceaux Choisis. Cinquième Edition. Paris, An^{viii}. 12mo, pp. 92; 28. IV. 32

CONTARINO (LUIGI).

Il Vago, E Dilettevole Giardino, Ove si leggono gli infelice fini de molti huomiui illustri. In Vicenza, 1589. 4to, pp. [12] 488 for 504 [56].
II. 21, note; II* 5, note; V. 4

Il Vago, & diletteuole Giardino.... Et in questa quinta editione accresciuto di uoua aggiunta, & con diligenza emendato. In Vicenza, MDCVII. 4to, pp. [12] 468 [42, 2 blank]; [24] 232. V. 5

CORTES (HIERONYMO).

110 Phisonomia y Varios Secretos De Natvraleza. En Tarragona, 1609. Small 8vo, ff. [4] 115 [1]. Third Edition. IV. 17

Phisonomia Natvral y varios secretos de natvraleza. Alcala, 1612. Small 8vo, ff. 132. IV. 18

Fisonomia, y varios secretos de Naturaleza. Paris, Libreria de Garnier Hermanos, ... 1858. 16°, pp. 320. IV. 17

CORTESE (ISABELLA).

I Secreti.... ne' quali si contengono cose minerali, medicinali, arteficiose, & Alchimiche, & molte de l'arte profumatoria, ... Con altri bellissimoi Secreti aggiunti. Venetia, 1565. 8vo, pp. [16] 207 [1]. III. 40

I Secreti.... Ne' quali si contengono cose Miuerali, Medicinali, Profumi, Belletti, Artiftitij, & Alchimia; con altre belle curiosità aggiunte. Di nvovo ristampati, e con somma diligenza corretti. In Venetia, 1625. Small 8vo, pp. [16] 206. II. 48; II* 33; III. 40

Secreti varii. Venetia, 1677. 8vo, pp. [24] 204 [4 blank]. III. 40

DICTIONARIUM POLYGRAPHICUM : or the whole body of arts regularly digested.

[Two volumes.] London, 1735. 8vo. I. Title, preface [pp. 4], Sigs. B-Nn 6. Frontispiece and 30 plates. II. Fly-leaf and Title. Sigs. B-l. 5. 1 leaf of advertisements. 24 plates. II. 44; II* 30

DIGBY (SIR KENELM).

Chymical Secrets, and Rare Experiments in Physick and Philosophy.... Published ... by George Hartman. London, 1683. Small 8vo, pp. [16] 272. 4 Plates. II. 51; II* 37

Ausserlesene, seltzame philosophische Ge¹einnüsse und chymische Experimente. Hamburg, 1684. Small 8vo, pp. [8] 269 [11]. 4 plates and portrait. II. 51; II* 37

- Theatrum Chimicum, ofte geopende deure der Chymische Verborgentheden... Met een vervolg over de Chymische Verborgentheden... door den Ridder K. Digby. Amsterdam, 1693. Small 8vo, pp. [16] 490 [22]; 170 [6]. 11 plates. Engraved Title. II. 51; II * 37
- 120 *Medicina Experimentalis Digbæana, das ist Auszerlesene... Artzney-Mittel.* Franckfurt, 1672. 8vo, pp. [16] 216 [28] 10 [2 blank]. VI. 21
- Discovrs ... touchant... La Poudre de Sympathie... Enrichie avec beaucoup des Remedes et Rare Secrets tirez de memoires du Chevalier Digby.* Utrecht, 1681. 24mo, pp. [2] 378. VI. 21
- Nouveaux Secrets Expérimentez, pour conserver La Beauté Des Dames, et pour guérir plusieurs sortes de Maladies: Tirez des Mémoires de M. le Chevalier Digby, ... Avec son Discours touchant la guérison des Playes, par la Poudre de Sympathie. Sixième Edition.* A La Haye.... M.DCC. 8vo, I. pp. [20] 192; II. [10] 156. VI. 21
- Remedes Souverains Et Secrets Experimentez... Avec plusieurs autres Secrets... A Paris, M.DC.LXXXIV.* 12mo, pp. [4] 299 [27, 2 blank]. VI. 21
- The Closet Opened. The Third Edition corrected.* London, 1677. 8vo, pp. [4] 251 [8, 1 blank]. Portrait. VI. 21
- Eröffnung unterschiedlicher Heimlichkeiten der Natur, ... und ... von einem Geheimmüsz in Heilungen der Wunden... Durch die Sympathiam... Franckfurt, 1664.* 8vo, pp. [2] 123 [7]; [2] 82 [6]. Third Edition. VI. 23
- Eröffnung unterschiedlicher Heimlichkeiten der Natur... Franckfurt, 1668.* 8vo, pp. [2] 123 [7]; [2] 81 [7]. Frontispiece. Fourth Edition. VI. 23
- Eröffnung unterschiedlicher Heimlichkeiten der Natur... Franckfurt, 1700.* 8vo, pp. [4] 179 [9]. Frontispiece? Fifth edition. VI. 23
- Choice and Experimented Receipts In Physick and Chirurgery ... and other Curiosities. Collected by the Honourable ... Sir Kenelm Digby Kt.... Translated ... by G. H.* London, 1668. 8vo, pp. [6] 308 [11, 1]. Portrait. VI. 20
- Choice and Experimented Receipts ... the second edition corrected and amended.* London, 1675. 8vo, pp. [4] 146 [8, 1, 1 blank]. VI. 20
- 130 *Discovrs ... touchant la Guerison des Playes par la Poudre de Sympathic.* Paris, 1658. 8vo, pp. 195 [2, 1 blank]. VI. 22
- A late Discourse ... touching the cure of wounds by the Powder of Sympathy. The Second Edition.* London, 1658. 12mo, pp. [10] 152 [4] [1, 1 blank]. VI. 22
- A late Discourse ... touching ... the Powder of Sympathy. The Third Edition.* London, 1660. 12mo, pp. [10] 152 [4] [2]. VI. 23
- A late Discourse ... touching ... the Powder of Sympathy. The Fourth Edition.* London, 1664. 12mo, pp. [10] 152 [4]. VI. 23

DIRCKS (HENRY).

See WORCESTER (MARQUIS OF).

DREI HUNDERT ... GEHEIMNISSE.

See ZIMMERMAN (H. T.).

DU MONT VERD (RAOUL).

Les fleurs et Secretz de Medecine.

See II. 50; II* 36.

Les fleurs et Secretz de Medecine: contenant plusieurs Remedes, et
Receptes.... 1547. On les vend a Paris. 8vo, ff. [12] 99 [2].

V. 26

Les Fleurs Et Secrets De Medecine, Ov Est Traicté De Plvsicvrs Receptes,
Et remedes conseruatifs pour le corps humain, contre toutes maladies.
A Roven, 1602. 8vo, pp. [16] 143 [1].

V. 27

DUPLEIX (SCIPION).

The Resoluer; or Curiosities of Nature. Written in French by Scipio
Du Plesis.... London. Printed by N. & I. Okes.... MDCXXXV.
24mo, pp. [24] 408.

IV. 18

La Curiosité Naturelle. Rouen, 1638. 8vo, pp. [24] 269 [1 blank].

IV. 18

DUTENS (LOUIS).

An inquiry into the origin of the discoveries attributed to the Moderns.
London, 1769. 8vo, pp. xl. 459.

II. 34; II* 19

Origine des découvertes attribuées aux Modernes. Troisième Édition,
considérablement augmentée. A Londres, 1796. 4to, pp. xxii. [2]
363 [1].

II. 34; II* 19

E. (G.)

See BREMER (WILLIAM).

ELIZABETH.

- 140 Queen Elizabeths Closset of Physical Secrets.... Collected by the elaborate
paines of four famous (*sic*) Physitians, and presented to Qucen Eliza-
beths own hands. London, 1656. 4to, pp. [8] 71 [1 blank]; [6] 146
[14]. Portrait.

IV. 21

THE ENGLISHMANS TREASURE.

See BREMER (WILLIAM).

ETTLICHE KÜNSTE, auff mancherley weisz Dinten vnd allerhand Farben zu
bereytē. Strassburg, 1563. 8vo, pp. [47, 1 blank].

III. 30

See ANDREE or ANDRIESEN (SYMGN).

EVONYMUS.

See GESNER (CONRAD).

FALLOPPIO (GABRIELE).

Secreti Diversi & miracolosi. In Venetia, 1578. Small 8vo, pp. [32]
366 [2]. I. 11 ; I* 14

Kunstbuch: ... von mancherley nutzlichen, bissher verborgnen, vñ
lustigen Künsten. [Augsburg], 1588. 8vo, pp. [16] 496 (for 466)
[46]; [43, 5 blank]. II. 41 ; II* 27

Wunderlicher menschlichem Leben gewisser, vnd sehr nutzlicher Secreten,
Drey Bücher. Franckfurt am Mayn, 1641. 8vo, pp. 474 [29, 1
blank]. I. 11 ; I* 14

FAUSTINUS (PERISAULUS).

De Triumpho Stultitiae. Venetiis, 1524. 8vo, ff. [59, 1 blank]. VI. 27

FENTON (EDWARD).

Certaine Secrete wonders of Nature... Gathered out of diuers learned
authors as well Greeke as Latine, sacred as prophane. By E. Fenton.
London, 1569. 4to, ff. [6] 148. IV. 8

FIORAVANTI (LEONARDO).

Del Compendio de I Secreti Rationali... libri cinque. Venetia, 1564.
8vo, ff. [20] 183 [1]. III. 40

Del Compendio de i Secreti rationali ... libri cinque. In Venetia, 1571.
8vo, ff. [21, 1 blank] 187 [1 blank]. Portrait of the author on the
verso of the preliminary leaf 21. I. 12 ; I* 14

A Compendium of the rationally Secrets, of ... Leonardo Phiorauante
Bolognese, deuided into three Books. London, 1582. 8vo, pp. [16]
128, 142 [2]. V. 37

150 Compendium oder Auszug der Secreten. Darmstadt, 1624. 8vo, pp.
399. I. 12 ; I* 14

De' Secreti Rationali ... Libri cinque. Venetia, 1640. 8vo, ff. [24] 190
[2 blank]. III. 40

Three exact pieces ... viz. his rational secrets. London, 1652. Small 4to,
pp. [8] 16 [2] 180 ; [6] 106 ; [10] 92 ; [12] 75. I. 12 ; I* 14

Miroir Vniuersel des arts et sciences, ... Mis en François par Gab. Chap-
pvy, ... Seconde edition. A Paris, 1586. 8vo, pp. [16] 526 [2
blank]. II. 41 ; II* 27

A Short Discovrs ... vppon Chirurgerie... Translated out of Italian into
English, by John Hester. London, 1580. 4to, ff. [8] 64. V. 36

FISCHER (EBERHARD HEINRICH).

Albertus Magnus der Andere. Das ist: Geheimnisse der Natur und
Kunst vor alle Stände ... In zwey Theilen. Altona und Leipzig ...
1797. 8vo, I. pp. [16] 200, Plate ; II. [10] 182. IV. 33

- FLAMEL (HORTENSIUS).
 Le Livre Rouge. Paris, 1841. 12mo, pp. 144. IV. 37
 Le Livre d'Or. Paris, 1842. 12mo, pp. 144. IV. 38
- FOUNTAIN (THE) OF KNOWLEDGE or British Legacy, containing among upwards of Two hundred other Curious Particulars ... the Indian way of marking on silk, ... London, n.d. 8vo, pp. [2] 123. Index wanting. IV. 33
- GENTLEMAN'S (THE) COMPANION: or Tradesman's Delight. Containing, The Mystery of Dying in all its Branches... The Art of Drawing, ... the quality of ... Metals... The Method of curing and preserving all Sorts of Wines... London, 1735. 12mo, pp. 259 [27]. VI. 25
- GESNER (CONRAD).
 160 Thesaurus ... de Remediis Secretis. Tigvri, 1552. 8vo, pp. 580 [48]. Woodcuts. III. 32
 De secretis remediis liber avt potivs thesavrvs. Tigvri, 1554. Small 8vo, pp. 580 [38]; 42 [6 blank]. II. 41; II* 26; III. 32
 Thesavrvs Evonymi Philiatri, de Remediis Secretis. Lvgdvni, 1554. 16mo, pp. [44, 4 blank] 499 [8, 7 blank]. V. 28
 Thesavrvs Evonymi Philiatri, de remediis secretis. Lvgdvni, 1555. 16mo, pp. [8] 498 [38]. Woodcuts. I. 9; I* 11
 Thesavrvs ... de Remediis Secretis. Lvgdvni, Apud Antonium Vincentium, 1555. 24mo, pp. [8] 498 [38]. Woodcuts. III. 33
 The Treasure of Evonymvs, conteyninge the vvonderful hid secretes of nature, touchinge the most apte formes to prepare and destyl Medicines, for the conseruation of helth... Translated ... by Peter Morvvyng. London, (1559). 4to, pp. [20] 408. V. 29
 Tresor des Remedes Secretz. A Lyon, 1559. 8vo, pp. [48] 440 [6]. I. 9; I* 11
 A new booke of destillatyon of waters. London, 1565. Small 4to, pp. [20] 408 [16]. I. 9; I* 11
 Evonymus. Conradi Gesner ... de Remedijs secretis, Liber. Without place (Zurich), date, and printer's name (Froschauer). Small 8vo, ff. 202 [17, 1 blank]. I. 9; I* 11
 Köstlicher Artzneyschatz. Zürych, 1608. Small 4to, pp. [8] 353 [15]; [4] 288 [16]. I. 9; I* 11
 170 The newe Iewell of Health. London, 1576. Small 4to, ff. [12] 258. I. 10; I* 12
 The practise of the new and old phisicke. London, 1599. Small 4to, ff. [11] 256. I. 11; I* 12

Quatre Livres des Secrets de Medicine, et de la Philosophie ehymique.

Par Iean Liebaut. A Roven, mvic. Svo, pp. [8] 352 [6, 2 blank]. I. 9; I* 12

Seerets de Medicine et de la Philosophie Chimique. Par Iean Liebaut.

Roven, 1643. Svo, ff. [7, 1 blank] 297 [14, 1 blank]. I. 9; I* 12

GLANVILLE (BARTHOLOMEW).

De Proprietatibus Rerum. MS. 15th century. On paper. III. 20

De proprietatibus rerum. Without place (Lugduni?), by Nicolaus Pistoris de Besssheym and Mareus Reinhard de Argentina. 1480.

Small folio, ff. [320]. I. 7, note; I* 9, note; II. 39; II* 24

De proprietatibus rerum. Without place and printer's name. 1482.

Small folio, ff. [278]. II. 39; II* 24

Liber de proprietatibus rerum. Argentine, 1485. Small folio, ff. [300].

II. 46; II* 32

Proprietates rerum. No place. 1488. Small folio, ff. [326].

II. 38, note; II* 24, note; II. 46; II* 32

La proprietaire de choses. Lion, Jean Cyber. No date (about 1495).

Folio, ff. [252]. II. 46; II* 32

180 De proprietatibus rerum. Londini in Aedibus Thomae Bertheleti. 1535.

Small folio, ff. ccclxxxviii. [The English Translation.] II. 39; II* 24

GOCLENIUS (RUDOLPHUS).

See LONGINUS (CÆSAR).

GOGUET (ANTOINE YVES).

De l'Origine des Lois, des Arts et des Sciences. Paris, 1758. 12mo.

I. i. pp. xl. 394, 1 Plate; ii. [2] 395-830, viij., 2 Plates. Table.

II. i. [2] viij. 445; ii. [3] 446-800. Table. III. i. [2] v.-viij. 309,

6 Plates; ii. [3] 310-614. Table. I. 2, note; I* 4 note; II. 45; II* 31

The Origin of Laws, Arts and Sciences. Edinburgh, 1775. Svo. Vol. I.

pp. xxvi. 402. Table and 3 plates. Vol. II. pp. vi. 424. Table.

Vol. III. pp. vi. 341. Table and 6 plates. I. 2, note; I* 4, note

De l'Origine des Lois, des Arts et des Sciences. Sixième Édition. Paris,

1820. Svo. Tome I. pp. [4] 418. 3 Plates. Tome II. pp. [2] 389

[1 blank, 2]. Tome III. pp. [2] 365. 6 Plates. II. 45; II* 31

GOHORY (JACQUES).

See LEMNIUS (LEVINUS).

GOUJET (CLAUDE PIERRE).

De l'état des sciences en France, depuis la mort de Charlemagne,

jusqu'à celle du Roi Robert. Paris, 1737. 12mo, pp. [4] 125 [3].

II. 45; II* 31

- GRANDE (LA) ET VERITABLE SCIENCE CABALISTIQUE ou La Sorcellerie Dévoilée
 Contenant 1° Le *Grand Albert*, ses ... *secrets*, sa vie, et ses travaux
 ... ; 2° Les Secrets mystiques de la magie naturelle du *Petit Albert* ;
 3° Le *Dragon Rouge* ou l'art de conjurer les esprits infernaux, de les
 vaincre et de les soumettre à sa volonté.... Paris ... (1830?) 12mo,
 pp. 108 ; 5-108 ; 5-108. 5 Illustrations. IV. 36
- GROOS (DANIEL).
 See ZIMMERMAN (H. T.).
- HARRIS (JOHN).
 Lexicon Technicum : or, an Universal English Dictionary of Arts and
 Sciences. London, 1704-10. Folio, no pagination. Vol. I. pp. [20] ;
 sigs. in fours : B—7 O i. Portrait and plates. Vol. II. pp. [24] ;
 sigs. B—7 H i, pp. 44 [10] 120 [62, 2]. Plates. II. 44 ; II* 30
- HAUDIQUER DE BLANCOURT (FRANÇOIS).
 De l'Art de la Verrerie. Paris, 1697. 12mo, pp. [16] 602 [5, 1 blank].
 8 Plates. III. 41
 The Art of Glass.... Now first translated into English. London, 1699.
 8vo, pp. [16] 355 [13]. 9 copper plates. I. 15 ; I* 18 ; III. 41
- HERACLIUS.
 Von den Farben und Künsten der Römer. Originaltext und Überset-
 zung ... von Albert Ilg. Wien, 1873. 8vo, pp. viii, xxiv, 190. II. 36 ; II* 21
- HISTORY OF THE FIRST INVENTERS.
 See PLEASANT (A) AND COMPENDIOUS HISTORY.
- HONORIUS.
 190 Ain lieblichs biechlin zu lesen von dem hochgelerten meister Luci-
 darius. Der do sagt von den wunderbaren Sachen der welt vnd
 des hymmels. Strassburg, Mathys Hupfuff, 1499. 8vo, ff. [30].
 8 woodcuts. I. 7 ; I* 9
- JANSSON VAN ALMELOVEEN (THEODOR).
 See ALMELOVEEN.
- JAUBERT (PIERRE).
 Dictionnaire Raisonné Universel des Arts et Metiers. Paris, M.DCC.LXXIII.
 In 5 vols. 8vo, I. pp. xxvij [3] 595 ; II. pp. [4] 622 ; III. pp. [4] 574 ;
 IV. pp. [4] 556 [4]. V. pp. 640. IV. 32
- JOHNSON (THOMAS).
 Cornucopiæ, or diuers secrets : Wherein is contained the rare secrets in
 Man, Beasts, Foules, Fishes, Trees, Plantcs, Stones and such like.
 At London, 1595. Small 4to, ff. [1 blank] [23]. IV. 13
 Cornucopiæ. London, 1596. 4to, ff. [23]. V. 38

JONSTONUS (JOHANNES).

An History of the Wonderful Things of Nature: Set forth in Ten severall Classes.... Now rendred into English By A Person of Quality. London, 1657. Folio, pp. [16] 1-10, 17-354, [1, 1].

VI. 13

K. (C.).

See Arts Master-Picce.

K. (T.).

The Kitchin-Physician: or, a Guide for Good-Housewives in Maintaining their Families in health.... Adorned with Sculptures, shewing the proper place of every Distemper in the Body. London, 1680. 12mo, pp. [10] 134. Folding Plate.

IV. 22

KARMARSCH (KARL).

Geschichte der Technologie. München, 1872. 8vo, pp. vii. [1 blank] 932.

I. 2, note; I* 4, note

KENT (COUNTESS OF).

A Choice Manual, or Rare Secrets in Physick and Chirurgery. The Nineteenth Edition. London, 1687. 24mo, pp. [16] 233 [1 blank, 5, 1 blank]. Portrait. A True Gentlewoman's Delight. Pp. [19, 1 blank] 140.

IV. 20

KERTZENMACHER (PETRUS).

Alchimia, Das ist, Alle Farben, Wasser, Olea, Salia, vnnnd Alvmina,... zubereyten. Franckfort, 1589. Small 8vo, ff. 79 [1]. Woodcuts of apparatus.

II. 48; II* 33

Alchimia, Das ist, alle Farben, Wasser, Olea, Salia, vnd Alvmina,... zubereyten. Franckfurt, 1613. Small 8vo, pp. 130 [4, 2 blank]. Woodcuts of apparatus.

II. 42; II* 28

200

Alchimia, Das ist Alle Farben, Wasser, Olea, Salia und Alumina,... zu bereiten. Without place, 1720. Small 8vo, pp. [2] 109 [3].

II. 43; II* 28

See ANDREE or ANDRIESEN (SYMON). See RECHTER GEBRAUCH D'ALCHEMIEI.

KIRANUS.

I. Moderante Auxilio Redemptoris Supremi, Kirani Kiranides, et ad eas Rhyakini Koronides. II. Liber Phisico-Medicus Kiranidvm Kirani, i.e. Regis Persarum... De quo quid sentiendum sit, requiratur in C. Barthii Advers. & Lexico Harpocratonis. Æra C. CIO IOC XXX VIII. 8vo, [16, 2] 159 [23].

VI. 16

The Magick of Kirani King of Persia, and of Harpocraton.... Now Published and Translated into English from a Copy found in a private Hand. Printed in the Year MDCLXXXV. 8vo, pp. [16] [8] 156 [14].

VI. 17

KUNCKEL (JOHANN).

- ARS Vitraria Experimentalis. Franckfurt, 1679. 4to, pp. [16] 350, 141
[35]. Portrait, engraved title, and 20 plates. I. 15; I* 18; III. 41; VI. 4
See MERRETT (C.). See NERI (A.).

KUNST-BOECK.

See ANDREE (SYMON).

KÜNSTBÜCHLIN. Augspurg, 1537. Small 4to, ff. xxxvii. [1]. I. 13; I* 15

KUNST-BÜCHLEIN, oder gründlicher Gebrauch von Etz-Arbeit. Franckfurth,
1687. 12mo, pp. 203 [9, 4 blank]. I. 13; I* 16

LABARTE (JULES).

Handbook of the Arts of the Middle Ages and Renaissance, as applied to
the decoration of Furniture, Arms, Jewels, &c., &c. Translated
from the French. With Notes, &c. Copiously illustrated. London,
1855. 8vo, pp. xxxvi. 443. II. 46; II* 31

LABORATORY (THE) or School of Arts. London, 1739. 8vo, pp. [8] 242 [6].
Frontispiece and 5 Plates. IV. 31

LANGLEY (THOMAS).

See VERGILIO (POLYDORO).

LEMERY (LOUIS).

New Curiosities in Art and Nature: or, a collection of the most valuable
secrets in all arts and sciences. London, 1711. 8vo, pp. [16] 354
[14]. Frontispiece and 8 plates. I. 16; I* 19

LEMNIUS (LEVINUS).

Les occvltis merveilles et secretz de Natvre... Traduif... par I. G. P.
[Iacques Gohory, Parisien.] Orleans, 1568. 16mo, ff. [18] 250 [20].
I. 8; II. 40; I* 10; II* 25

210 De Miracvlis Occvltis Natvræ, Libri IIII. Antverpiæ, 1581. 8vo, pp.
[16] 582 [26]. II. 41; II* 26

De Miraevlis Occvltis Natvræ, Libri IIII. Frankofvrtdi, 1590. 8vo, pp.
[16] 582 [54, 4 blank]. III. 31

De Miraevlis Occvltis Natvræ, Libri IIII. Francofvrti, 1604. Square
16mo, pp. [16] 582 [55, 3 blank]. I. 8; I* 10

De Miracvlis Occvltis Natvræ, Libri IIII. Francofvrti, 1611. Square
16mo, pp. [16] 582 [55, 3 blank]. I. 8; I* 10

Occulta Naturæ Miracvla, Libri IIII. [Leyden, 1651-55.] 24mo, pp.
[20] 638. III. 32

The secret miracles of Nature: in four books. London, 1658. Small
folio, pp. [16] 398. I. 8; I* 10

- LIEBAUT (JEAN).
Trois Livres de l'embellissement et ornement dv corps humain. Paris,
1582. Svo, pp. [16] 463 [1 blank, 14, 2 blank]. I. 15, note; I* 18, note
See GESNER (CONRAD).
- LILIUS (ZACHARIAS).
Liber de origine et laudibus Seientiarum. Florentiæ, 1496. 4°, ff. [72].
II. 22, note; II* 6, note; III. 10
- LOCATELLI (LODOVICO).
Theatro d'Arcani. Milano, 1644. Svo, pp. [34] 456 [24]. I. 12; I* 15
Theatro d'Arcani. Venetia, 1667. Svo, pp. [16] 392 [22]. I. 13; I* 15
- LONGINUS (CÆSAR).
220 Trinum Magicum. Francofvrti, M.DC.XIV. 24mo, ff. [24] 635. V. 16; VI. 5
The contents are the same as in the following.
Trinum Magicum, ... Continens 1. De Magia Naturali, ... 2. Theatrum
Naturæ.... 3. Oracula Zoroastris.... Accessere Nonnulla Secreta
Secretorum & Mirabilia Mundi. Francofvrti, M.DC.XVI. 24mo, pp.
[20] 603. VI. 5
- LOVEL (ROBERT).
Panzooryktologia. Oxford, 1661. Svo, pp. [96] 519 [3 blank]; [2] 152,
with leaf between AAA 4-5. IV. 21
- LULLIUS (RAYMUNDUS).
De secretis naturæ siue quinta essentia libri duo. Venetijs, 1542. Small
Svo, pp. 324 [8]. II. 51; II* 37
De Alchimia Opuscula ... Item. De Secretis Natvræ, seu de quinta
essentia liber unus. Norimbergæ, 1546. Small 4to, ff. 113. II. 51; II* 37
De Secretis Natvræ, sev de quinta essentia liber vnus. Coloniae, 1567.
Small Svo, pp. [8] 376. II. 51; II* 37
- LUPTON (THOMAS).
A Thousand Notable Things of Sundrie Sorts. London, (circa) 1596.
4to, pp. [6] 174 (for 214) [19, 1 blank]. V. 39
A Thousand Notable things of sundrie sorts. Newly corrected. London,
1601. 4to, pp. [6] 214 [19, 1 blank]. IV. 15
A Thousand Notable Things containing Modern Curiosities. London, G.
Conyers, no date. 12mo, pp. [2] 264 [10]. IV. 15
A Thousand Notable Things, on Various Subjects. London, 1776. Svo,
pp. [4] 252 [15, 1]. IV. 15
230 A Thousand Notable Things, on Various Subjects. London, MDCXCIV.
12mo, pp. [4] 262 [14]. IV. 16

- A Thousand Notable Things ... Being a rich Cabinet... To which is prefixed, The Century of Inventions, by The Marquis of Worcester, 1655 (*sic*); Also, A Discourse on the Emigration of British Birds. London, 1815. 12mo, pp. xxiv, 220. IV. 16
- M. (W.).
The Queen's Closet opened. Incomparable Secrets in Physick, Chyrurgery, ... &c. London, 1683. 12mo, pp. [12] 190 [8]; [2] 106 [4]; 123 [7, 4 blank]. Portrait of Queen Henrietta Maria. IV. 23
- MAGIE (LA) DES ARTISTES. Harlem, 1783. 12mo, pp. [4] xvij [1 blank] 214 [20]. I. 17; I* 20
- MAIER (MICHAEL).
Verum Inventum, Hoc est, Munera Germaniæ. Francofurti, 1619. Small Svo, pp. [16, 1-10] 11-249 [1, 6 blank]. III. 15
- MALDINY (JOHANNES JACOBUS DE).
Mirabilia Mundi, sive de Scientiarum Artiumque omnium origine et Progressu Tractatus. August. Vindel., 1754. Svo, pp. [12] 135 [5]. 2 Plates. IV. 31
- MANNI (DOMINICO MARIA).
De Florentinis Inventis Commentarium. Ferrariæ, 1731. 4to, pp. [8] 114 [5, 1 blank]. II. 45; II* 31
- MERCURIALIS (HIERONYMUS).
De Decoratione Liber, ... Additi nunc primùm duo Tractatus; alter, De varicibus; alter, de reficiendo naso. Francofurti, 1587. Svo, pp. [8] 199. II. 48; II* 34
- MERRETT (CHRISTOPHER).
See NERI (ANTONIO). See KUNCKEL (JOHANN).
- MEURDRAC (MARIA).
Die mitleidende und leichte Chymic. Franckfurt, 1676. 12mo, pp. [8] 312 [19, 1 blank]. I. 15; I* 18

La Chimica Caritatevole, e facile. In Venetia, 1682. 12mo, pp. 12, 256 [20]. II. 41; II* 26
- MICHAEL SCOTUS.
240 Liber Phisionomiæ. No place, MCCCCLXXVII. 4to. a 10, b to h in eights, i 6, k 5 [k 6 blank?] 23 lines, roman type. [Hain,* 14550]. I. 6, note; I* 9, note

MIZAUD (ANTOINE).

Memorabilium Aliquot Naturæ Arcanorum Syluula, rerum variarū Sympathias & Antipathias, seu naturales concordias & discordias, libellis duobus complectens. Lvtetiae, 1554. 16mo, ff. 79 [1]. IV. 5

Memorabilium ... Sylvula. Franckfurt, 1592. Small 16° pp. 88. IV. 5

Secretorum Agri Enchiridion Primum. Lvtetiae, 1560. Small 8vo, ff. [8] 180. IV. 5

Secrets de la Lvnc. Paris, 1571. Small 8vo, ff. [8] 24. IV. 4

Memorabilium, vtiliū, Ac Ivcvndorum Centuriæ Novem, in Aphorismos Arcanorum omnis generis locupletes, perpulchrè digestæ. Lvtetiae, M.D.LXVII. 8vo, ff. [16] 136. IV. 6

Memorabilium, sive Arcanorum Omnis Generis, per Aphorismos Digestorum, Centuriæ IX. Et, Democritus Abderita, de rebus Naturalibus & Mysticis. Cum Syncsii, et Pelagii Commentarijs. Interprete de Græca lingua, Dominico Pizimentio Vibonensi, Italo. Coloniae, D. M. LXXII. 24°, ff. [52] [2 blank] 245 [1 blank]. IV. 6

Memorabilium ... Centuriæ IX. Et Democritus Abderita ... Cum Synesii, et Pelagii Commentarijs. (Cologne, 1573). 12mo, ff. [45] 245. IV. 7

Memorabilium, ... Centuriæ Novem, ... perpulchrè digestæ. Lvtetiae, M.D.LXXXIII. 8vo, ff. [16] 132. IV. 6

Centuriæ IX. Memorabilium, vtilium, ac ivcvndorum. Francofvrdi, 1592. 16mo, pp. [32] 267 [1 blank]. IV. 6

MONARDES (NICOLAS).

250 Ioyfvll Newes Out of the New-found VVorldc.... Englished by John Frampton.... Wherevnto are added three other bookes treating of the Bezaar stone, the herb Escuerconra, the properties of Iron and Steele in Medicine, and the benefit of Snow. London..., 1596. 4to, ff. [3] 1-163, 173-187. (173 is a misprint for 171; and 7 leaves have been dropped in the numbering.) V. 39, note

MONTÈZ (LOLA).

L'Art de la Beauté ou Secrets de la Toilette. ... Préface et notes par H. Émile Chevalier. Paris, 1862. 12mo, pp. [4] [1-3] 4-176. Photograph of Lola as frontispiece. V. 44

MONT VERD (RAOUL DU).

See DU MONT VERD.

NAMREMMIZ.

See ZIMMERMAN (HEINRICH THEODOR).

NAPIER (JAMES).

- Manufacturing Arts in Ancient Times. London, 1874. 8vo, pp. v. [3]
367. I. 3, note; I* 5, note

NATURA EXENTERATA: or Nature Unbowelled by the most Exquisite Anatomizers of Her. Wherein are contained, her choicest Secrets. ... Containing in the whole, onc thousand seven hundred and twenty ... London, 1655. 8vo, pp. [6] 406 [Table wanting?] VI. 19

NERI (ANTONIO).

- L'Arte Vitraria, Firenze, 1612. 4to, pp. [8] 114 [6]. III. 40
- The Art of Glass... Translated into English [by Christopher Merrett].
London, MDCLXII. 8vo, pp. [24] 362 [4]. I. 15; I* 18; III. 40; VI. 3
- De Arte Vitraria Libri Septem. Amstelodami, 1668. 12mo, pp. [28]
455 [17]. 6 folding plates. Engraved Title. II. 41; II* 26; III. 41
- De Arte Vitraria Libri Septem. Amstelodami. 1669. 12mo, pp. [28]
455 [17]. Engraved Title and 6 Plates. III. 41
- Sieben Bücher: handlend von der künstlichen Glass- und Crystallen-
Arbeit, ... Verdeutschet durch Fridrich Geisslern. Franckfurt,
1678. 8vo, pp. [32], 283 [5] 184. 10 plates. II. 41; II* 26
- De Arte Vitraria Libri VII. Amstelædami, 1686. 12mo, pp. [36]
440 [16]. Engraved title and 6 folding plates. I. 15; I* 18; III. 41
- 260 Ars Vitraria Experimentalis. Franckfurt, 1689. 4to, pp. [12] 472 [20].
Portrait, engraved title, and 20 plates. III. 41
- Art de la Verrerie, De Neri, Merret et Kunckel... Traduits de l'Alle-
mand, par M. D.*** A Paris, M. DCC. LII. 4to, pp. [4] LV. [1 blank];
[2] 629 [3]. 16 Plates. III. 41; VI. 4

NEUER WUNDER-SCHAUPLATZ.

See POPPE (JOHANN HEINRICH MORITZ VON).

NIGRINUS (CASPAR).

Der aus seiner Asche sich wieder schön verjüngende Phönix, Oder
gantz neuer Albertus Magnus ... Aus vielen ... Authoribus ... zusam-
men getragen. Hamburg, 1729. 8vo, pp. [2, 14] 432. Wants the
Register. IV. 30

NOEL, CARPENTIER ET PUISSANT.

Dictionnaire des Inventions, des Origines et des Découvertes. Quatrième
Édition. Bruxelles, 1838. 8vo, pp. vi, 7-562. V. 11

NOLLIUS (HEINRICH).

Natvræ Sanctvarivm. Francofvrti, 1619. Svo, pp. 838 (for 858) [12,
2 blank]. I. 14; I* 18

P. (W.). [PHILIP W.]

See BOOKE (A) OF SECRETS.

PANCIOLO (GUIDO).

Rerum Memorabilium Libri Duo. Editio Tertia. Ambergæ, 1612. 2 vols.
Small Svo, I. pp. [16] 751 (for 749) [3, 28, 2 blank]. III. 14

Rerum Memorabilium [libri duo]. Francofurti, 1631. 4to, pp. [12] 349
[23]; [8] 313 [17, 2 blank]. Pars Prior, engraved title; Pars Pos-
terior, printed title. II. 33; II* 18

Rerum Memorabilium [libri duo]. Francofurti, 1646. 4to, pp. [8] 349
[23]; 313 [17]. Pars I., engraved title only; Pars II., no title. II. 33; II* 18

Rerum Memorabilium [libri duo]. Francofurti, 1660. 4to, pp. [8] 349
[23]; 313 [17]. Pars. I., engraved title only. Pars II., no title. II. 33; II* 18

The History of many memorable things lost. London, 1715. 2 vols.
12mo, I. pp. [14] 1-242; II. [6] 265-452 [12]; advertisements, pp. 16.
II. 33; II* 18

270 The History of Many Memorable Things in Use among the Ancients.
London, 1727. 2 vols. 12mo, I. pp. [14, 2 blank] 1-242; II. [6]
265-452 [12]. II. 33; II* 18; III. 14

PARTRIDGE (JOHN).

The treasure of commodious Conceites, and hidden Secrets. ... now
the fourth tyme corrected, and enlarged, with divers necessary and
new additions. London, 1584. Small Svo, ff. [44]. IV. 11

The treasure of commodious Conceites, and hidden Secrets. London,
1586. Svo, ff. [44]. IV. 11

The Treasvrie of hidden Secrets. Commonly called the good Huswives
Closet of provision. London, 1596. 4to, ff. [36]. V. 38

The Treasure of hidden Secrets. Commonlie called, The Good-huswiues
Closet of Prouision. London, 1600. Small 4to, ff. 36. IV. 12

PASCH (GEORGE).

De Novis Inventis, ... Tractatus, ... Editio Secunda, Priori quarta parte
auctior. Lipsiæ, MDCC. 4to, pp. [20] including Frontispiece, 812,
for 793 [125, 1 blank]. V. 10

PASTREGICUS (GULIELMUS).

De Originibus Rerum Libellvs. (Venetijs, 1547.) Svo, ff. 131 [1 blank]. III. 7

PELIGOT (EUGENE).

Le Verre. Paris, 1877. Svo, pp. [4] iii. [1 blank] 495. I. 16, note ; I* 18, note

PELLATT (APSLEY).

Curiosities of Glass Making : with details of the processes and productions of ancient and modern ornamental glass manufacture. London, MDCCCLXIX. 4to, pp. [8] 146. 6 Plates. IV. 38

PERSON (DAVID).

Varieties : Or, a Svrveigh of Rare and excellent matters,... Wherein the principall Heads of diverse Sciences are illustrated, rare secrets of Naturall things unfoulded, &c. London, 1635. 4to, pp. [52] 256 [4] 105 [1 blank]. IV. 19

PETIT (LE) ALBERT.

See ALBERTUS PARVUS.

280 PHYSICA EXOTICA, Seu Arcana Naturæ, et Artis. Cassoviæ, 1767. 12mo, pp. 189 [9]. IV. 31

PLAT (HUGH).

The Jewell House of Art and Nature. London, 1594. Small 4to, pp. [16] 96 ; 60 ; 76. II. 49 ; II* 34

The Jewel House of Art and Nature. London, 1653. Small 4to, pp. [8] 232. I. 15 ; I* 17

A new, cheape, and delicate Fire of Cole-balles. London, 1603. Small 4to, ff. [15]. II. 49 ; II* 35

Delightes for Ladies, to adorne their Persons, Tables, closets and distillatories : With Beauties, banquets, perfumes and waters. London, 1602. 24mo, ff. [96]. V. 43

Delightes for Ladies. London, 1603. 24mo, ff. [96]. V. 43

Delightes for Ladies. London, 1640. 24mo, ff. [96]. V. 43

Delightes for Ladies. London, 1647. 24mo, ff. [96]. V. 43, 44

Delightes for Ladics. London, 1654. 24mo, ff. [96]. V. 43, 44

PLATTES (GABRIEL).

A Discovery of Subterraneall Treasure. London, 1639. Small 4to, pp. [10] 60. I. 15 ; I* 17 ; III. 41

290 A Discovery of Subterranean Treasure. London, 1679. 4to, pp. [4] 24. III. 41

A Discovery of Subterranean Treasure. London, 1738. 12mo, pp. [18] 215 [1 blank] ; [4] 66. II. 41 ; II* 27

PLEASANT (A) AND COMPENDIOUS HISTORY of the first inventers ... of the most famous arts ... in the whole world. London, 1686. 12mo, pp. [16] 159 (for 169) [5]. I. 2, note ; I* 5, note ; III. 14

POLYDORO VEROILIO.

See VERGILIO (POLYDORO).

POPPE (JOHANN HEINRICH MORITZ).

Neuer Wunder-Schauplatz der Künste und interessantesten Erscheinungen im Gebiete der Magie, Alchymie, Chemie, Physik, Geheimnisse und Kräfte der Natur, Magnetismus, Sympathie und verwandte Wissenschaften. Stuttgart, 1839. 8vo. I. pp. 376, Portrait of Paracelsus and 9 Plates. II. 342, 5 Plates ; III. 324, 8 Plates ; IV. 340, 8 Plates ; V. 338, 8 Plates ; VI. 342, 8 Plates. IV. 34

Geschichte der Technologic. Göttingen, 1807-11. 8vo, I. pp. viii. 506 ; II. pp. x. 628 ; III. pp. viii. 478 [2]. I. 2, note ; I* 4, note

POPPE (ADOLPH).

Chronologische Uebersicht der Erfindungen und Entdeckungen ... Zweite Auflage. Frankfurt a.M., 1857. 8vo, pp. iv. 74. III. 20

PORTA (GIOVANNI BATTISTA).

Magiæ Natvralis Libri Viginti. Francof., 1591. 8vo, pp. [36] 669. I. 12 ; I* 15

Magiæ Natvralis Libri Viginti. Hanoviæ, 1619. 8vo, pp. [31, 1 blank] 622. II. 42 ; II* 27

Magiæ Naturalis Libri Viginti. Lugd. Bat., 1644. 12mo, pp. [16] 670 [23, 3 blank]. I. 12 ; I* 15

Magia ofte de Wonderlijcke, ... Wercken der Naturen. Leyden, 1655. 8vo, pp. [10] 379 [9]. III. 40

300 Natural Magick in Twenty Books. London, 1658. Small folio, pp. [8] 409 [1 blank, 6]. I. 12 ; I* 15

Magiæ Naturalis Libri Viginti. Amstelod., 1664. 12mo, pp. [16] 670 [22]. I. 12 ; I* 15

POWELL (THOMAS).

Humane Industry : or, a History of most Manual Arts. London, 1661. 8vo, pp. [16] 188 [4 blank]. III. 15

PROFITABLE (A) BOOKE declaring dyuers approued remedies, to take out spotts and staines. London, 1596. 4to, pp. [2] 78 [6, 2 blank]. V. 38

See ANDREE or ANDRIESEN (SYMON).

PULLEYN (WILLIAM).

The Etymological Compendium, or Portfolio of Origins and Inventions. London, 1828. 12mo, pp. xv. [1 blank] 356. III. 19

QUEEN'S (THE) CLOSET OPENED.

See M. (W.).

QUINTI (JOSEPH).

Les Admirables Secrets de la Medecine Chimique. A Venise, M.DCCXI.
12mo, pp. [10] 281 [7]. 3 Plates. IV. 25

See AUDA (DOMENICO).

RAYNALDE (T.).

The Birth of Mankind. London, 1540. III. 29, note

The Birth of Mankind. 1565. Small 4to, ff. [14] cxxxii. 4 ff. of illustrations. III. 29, note

RECHTER GEBRAUCH D'ALCHIMEI, mitt vil bissher verborgenen, ... Künsten.

No place or printer's name, 1531. Small 4to, ff. xxvii. [1 blank]. II. 42; II* 27

RECUEIL DES PLUS BEAUX SECRETS DE MEDECINE, ... Comme aussi plusieurs Secrets curieux sur d'admirables effets de la Nature and de l'Art.

Paris, 1695. 12mo, pp. 406 [23, 1 blank]. Frontispiece. II. 43; II* 29

REISCH (GREGORIUS).

310 Margarita Philosophica. Freiburg, 1503. 4to. V. 18

Margarita Philosophica. Basilee, 1517. 4to. V. 21

Margarita Filosofica. Tradotta da Giovanni Paolo Gallucci. Venetia, 1600. 4to. V. 22

RIVERIUS (LAZARUS).

The Secrets.... Newly Translated from the Latin, by E. P. M. D. London, MDCLXXXV. Svo, pp. [6] 124 [advertisements 2, 1 blank]. IV. 23

ROLLIN (CHARLES).

The History of the Arts and Sciences of the Ancients. Glasgow, 1837. Svo, pp. xxx. iii. [1 blank] 631. II. 34; II* 20

ROSS (ALEXANDER).

Arcana Microcosmi: or, The hid Secrets of Man's Body discovered; in an Anatomical Duel between Aristotle and Galen concerning the Parts thereof. London, 1652. Svo, pp. [16] 267 [9]. II. 50; II* 36

ROUSSEAU ().

Secrets et Remedés Éprouvez. Dont les préparations ont été faites au Louvre. A Paris, M.DC.XCVII. 12mo, pp. [94] 241 [5]. IV. 26

SALMON (WILLIAM).

Polygraphice. Second Edition. London, 1673. Svo, pp. [8] 352 [8]. Frontispiece, and engravings in the text. III. 42

Polygraphice. Eighth Edition. London, 1701. Svo, pp. [32] 939. Portrait, engraved title, and 23 (?) plates. I. 17; I* 19

SAMMLUNG DER GRÖSSTEN GEHEIMNISSE ausserordentlicher Menschen in alter
Zeit. Cöln, 1725. 8vo, pp. [4] 508. IV. 35

SARDI (ALESSANDRO).

320 ... Memoires et Histoire de l'origine invention, & auteurs des choses &
sciences. ... Par Gabriel Chapuis. ... A Lyon, 1584. Small 8vo,
pp. [6] 86. II. 33; II* 17

DE RERUM INVENTORIBUS, LIBRI DUO.

See VERGILIO (POLYDORO).

SAUZAY (A.).

Marvels of Glass-making. London, 1870. 8vo, pp. xx. 272. Plates.
I. 16, note; I* 18, note

SCHMUCK (MARTIN).

Secretorum Naturalium, chymicorum, et medicorum Thesauriolus, oder
Schatzkästlein. Schleusingen, 1637. Small 8vo, pp. 79 [1 blank];
[8] 103 [1 blank]. II. 43; II* 29

Secretorum Naturalium ... Thesauriolus. Nürnberg, 1652-3. Small 8vo,
pp. 79 [1 blank]; [8] 103 [1 blank]. II. 43; II* 29

Wohlangerichtetes AErarivm Chymicvm. Gotha, 1686. 12mo, pp. 198
[15, 3 blank]. II. 43; II* 29

SCHOTT (CASPAR).

Ioco-Seriorum Naturæ et Artis ... Centuriæ tres. Without place, date
(about 1661), and printer's name. 4to, pp. [12] 363. Title and 22
plates. By Aspasius Caramuelius, *Pseudonym*. I. 14; I* 17

Physica Curiosa. Editio altera auctior. Herbipoli, 1667. 4to, pp. [56]
1389 [23]. 61 Plates and Engraved Title. I. 14; I* 16

Magia Universalis Naturæ et Artis. Bamberg. 4to. 1677. I. pp. [8]
538 [14]. Title and 25 Plates.—1674. II. pp. [24] 432 [13]. Title
and 31 (32) Plates.—1677. III. pp. [22] 732 [12]. Title and 21
Plates.—1677. IV. pp. [32] 470 [2][15]. Title and 13 Plates. I. 14; I* 17

SCHULTZ (GOTTFRIED).

Schatzkammer rarer und neuer Curiositäten. Hamburg, 1689. 8vo,
pp. [8] 592 [24]. II. 43; II* 29

SCOTUS (MICHAEL).

See MICHAEL SCOTUS.

SECRE (LES) DES DAMES ... publiés ... par les D^{rs}. Al. C***** & Ch.-Ed.
C***** [Colson]. Paris, 1880. 8vo, pp. [4] XLIV. [2] 114 [4].
Frontispiece. III. 28

SECRET DE LHYSTOIRE NATURELLE.

See C'EST LE SECRET DE LHYSTOIRE NATURELLE.

- 330 SECRETS (THE) AND WONDERS OF THE WORLDE... Abstracted out of that excellent naturall Historiographer Plinic. Translated out of French into English. London, 1587. 4to, ff. [31]. IV. 12
- [SHIRLEY (JOHN)].
The Accomplished Ladies Rich Closet of Rarities: or the Ingenious Gentlewoman and Servant-Maids Delightfull Companion. London, 1687. 12mo, pp. [8] 233 [1]. IV. 23
- SILBERMANN ().
Manuel métallotechnique, ou recueil de secrets et de curiosités sur les métaux & les minéraux, appliqués aux arts & aux métiers. Paris, 1773. 12mo, pp. [4] vj. 473 [2, 1 blank]. II. 41; II* 27
- SNOW (T.).
Apopirosopy: or, a Compleat and Faithful History of Experiments and Observations. London, 1702. Svo, pp. [47, 1 blank] 240, with 8 between 96 and 97. IV. 27
- SOMMAIRE DE LA MEDECINE CHIMIQUE ... Avec vn Recueil de diuers Secrets de Medecine. Paris, 1632. Svo, pp. [16] 433 [1 blank]. II. 43; II* 28
- TEXTOR (JOHANNES RAVISIUS).
Officina sive Theatrum Historicum et Poeticum. Basileæ, 1617. Svo, pp. [96] 942 [72, 2 blank]. III. 14, note
Officina. Basileæ, 1626. Svo, pp. [96] 942 [72, 2 blank]. III. 14, note
Officinæ ... Epitome. Aureliæ Allobrogum, 1626. Svo, pp. 412 [4], 426 [6], 79. III. 14, note
- THEOPHILUS.
An Essay upon Various Arts. London, 1847. Svo, pp. [4] li. [1 blank] 447. 2 Illuminated facsimiles. I. 5; I* 7
Schedula Diversarum Artium. Uebersetzt... von Albert Ilg. 1 Theil. Wien, 1874. Svo, pp. [4] xlvii. [3] 400. II. 35; II* 20
- TREASURIE OF HIDDEN SECRETS.
See PARTRIDGE (JOHN).
- TRINUM MAGICUM.
See LONGINUS (CÆSAR).
- TURNER (WILLIAM).
See BREMER (WILLIAM).
- ULSTAD (PHILIP).
340 Coelum Philosophorum, seu de Secretis Naturæ Liber. Argentoragi, 1526. Small folio, ff. LXIII. [1]. V. 24
Coelum Philosophorum. Argentorati, 1528. Small folio, ff. LXIII. V. 24

- Coelum Philosophorum. s. l. & a. Small folio, ff. LVII. [1 blank]. V. 24
 Coelum Philosophorum. Argentorati, 1535. Small folio, ff. [4] 44. V. 24
 Coelum Philosophorum, von heimlichkeit der Natur. Franckfurdt am
 Mayn, 1551. Small folio, ff. [4] LXIII. V. 24

VANINI (GIULIO CESARE).

- De admirandis Naturæ Reginæ Deæque Mortalium Arcanis Libri qvatvor.
 Lvtetie, 1616. 8vo, pp. [16] 495 [1]. II. 43 ; II* 28

VERGILIO (POLYDORO).

- De inventoribus rerum libri tres. Venetiis, Christophorus de Pensis,
 1499. Small 4to, 88 leaves, not numbered. II. 26 ; II* 11
 De inuentoribus reruꝝ libri tres. Venetiis, Johannes de Cereto de Tridino,
 1503. Small 4to, 81 leaves and 1 blank leaf, not numbered. II. 27 ; II* 11
 De inventoribus rerum libri tres. Argentoraci, Matthias Schürer, 1509.
 Small 4to, ff. [6] LXVI. II. 27 ; II* 12
 De Inuentoribus Rerum Libri Tres. Parrhisiis. Denis Rocc. 1513.
 4to, ff. xlvi. [2]. V. 3
 350 De Inuentoribus Rerum Libri Tres. Parisius (*sic*) pro Oliuerio Senant.
 No date. Small 4to, ff. 61 [2]. Sig. L4, probably blank, wanting. III. 13
 De inventoribus rerum (libri octo). Parisiis, Robertus Stephanus,
 1528-29. Small 4to, ff. 141 [27]. II. 28 ; II* 12
 De rerum inuentoribus libri octo. Basileæ, Michael Isingrinus, 1544.
 8vo, pp. [56] 615 [1 blank]. II. 28 ; II* 13
 An Abridgement of the notable Worke of Polidore Vergile. London, R.
 Grafton, 1546. 16th April. Small 8vo, ff. [8] 156 [12]. III. 13
 An Abridgemēt of the notable worke of Polidore Virgile. London, R.
 Grafton, 1546. January and April. Small 8vo, ff. [8] 156 [11, 1].
 II. 30 ; II* 14
 An Abridgemēt of the notable Worke of Polidore Vergile ... by Thomas
 Langley. London, Richarde Grafton, 25 Ianuarie, 1546. Small
 square 8vo, ff. [8] clvi. [11]. II. 29 ; II* 14
 De rerum inuentoribus libri octo. Basileæ, Isingrinus, 1546. 8vo, pp.
 [48] 524 (for 534). II. 28 ; II* 13
 De l'origine e de gl' inventori de le leggi, costumi, scientie, arti. In
 Vinegia, Gabriel Giolito, 1550. Small 8vo, ff. 239 [5]. II. 28 ; II* 13
 An abridgement of the notable worke of Polidore Vergile ... by Thomas
 Langley. London, R. Grafton. Mense Iulij, 1551. Small square
 8vo. ff. [8] cxxxv. (for cli.) [7]. II. 30 ; II* 15
 De Rerum Inventoribus Libri Octo. Basileæ, per Thomam Guarinum,
 1563. 8vo, pp. [32] 578 [90, 2 blank]. III. 10

- 360 An abridgemente of the notable Worke of Polidore Virgile. London, Thon Tisdale. No date (about 1570). Small square 8vo, ff. [8] clii. [15]. II. 31; II* 16
- De inventoribus rerum, libri octo. Romæ, 1576. Small 8vo, pp. [46, 2 blank] 478 [2]. II. 25; II* 9; III. 10
- De Rervm Inventoribvs Libri Octo. Romæ, 1585 [in the colophon, 1576]. 8vo, pp. [46, 2 blank] 478 [2]. III. 10
- De rervm inventoribvs libri octo. Without place. Iacobvs Stoer. 1604. 16mo, pp. [48] 675 [122, 3 blank]; 126 [2]. [Contains Sardi's tract.] II. 28; II* 13
- De Rerum Inventoribus Libri Octo. Argentorati, 1606. 8vo, pp. [31, 1 blank] 502 [87, 1 blank] 93 [1, 2 blank]. [Contains Sardi's tract.] III. 11
- De rervm inventoribvs libri octo. Coloniae Agrippinae, Bernardvs Gvalthervs, 1626. 8vo, pp. [32] 790 (for 780) [65, 1 blank]. [Contains Sardi's tract.] II. 28; II* 13
- De rervm inventoribvs libri viii. Lvgdvni Batavorvm, Franciscvs Hegervs, 1644. 12mo, pp. [40] 565 [1 blank]; [2] 209 [93, 2 blank]. II. 28; II* 13
- An Abridgement of the Works of the famous Antiquary Polidore Virgil. London, 1659. Small 8vo, pp. [8] 311 [25]. III. 14
- The works of the famous Antiquary Polidore Virgil. London, 1663. Small 8vo, pp. [4] 311 [25] [12]. III. 14
- De inventoribvs rerum libri viii. Amstelodami, Daniel Elzevirivs, 1671. 12mo, pp. [40] 511 [1 blank]; [6] 100 [92, 2 blank]. II. 28; II* 13
- 370 De Gli Inventori delle Cose. Libri Otto. Tradotti per Franc. Baldelli. Brescia, 1680. 4to, pp. [56] 383. V. 4
- An abridgement of the notable work. New York, 1868. 8vo, pp. xvi. 242 xvii. II. 32; II* 16; III. 14

VICARY (THOMAS).

See BREMER (WILLIAM).

VINCENT DE BEAUVAIS.

Speculum naturale. (Strassburg, Johann Mentellin, about 1473.) Large folio, semi-goth. char., 2 cols., 66 lines. Vol. I., ff. [368.] Vol. II., ff. [327]. I. 5; I* 7; II. 36; II* 21

Speculum naturale. Without date, place, or printer's name. Large folio, goth. char., 2 cols., 67-69 lines, besides head-lines. Vol. I., ff. [318], of which 19 and 318 are blank. Vol. II., ff. [280]. 281 wanting? II. 38; II* 23

WECKER (JOHANN JACOB).

Ein nutzliches Büchlein von mancherley künstlichen Wassren. Basel, 1570. 8vo, pp. [16] 127. III. 39

- De Secretis libri xvii. Basileæ, 1613. 8vo, pp. [15, 1 blank] 667 [27].
II. 42; II* 27
- Kunstbuch ... von ... künstlichen Wassern. Basel, 1616. 8vo, pp. [6]
86 [4]. II. 41; II* 26
- De Secretis libri xvii. Basileæ, 1642. 8vo, pp. [15, 1 blank] 667 [27,
2 blank]. II. 48; II* 33
- Eighteen Books of the Secrets of Art and Nature ... by Dr. R. Read.
London, 1661. Folio, pp. [10] 346 [8, 3, 1 blank]. III. 40
- De Secretis libri xvii. Basileæ, 1662. 8vo, pp. [15, 1 blank] 667 [27,
2 blank]. II. 42; II* 27
- 380 Les Secrets et Merveilles de Natvre. Roven, 1663. 8vo, pp. [15,
1 blank] 1012 [41, 1 blank]. II. 42; II* 27
- De Secretis libri xvii. Basileæ, 1701. 8vo, pp. [12], 764, [32, 4 blank]. I. 13; I* 16
See ALESSIO.
- WEIDENFELD (JOHANN SEGER).
- De Secretis adeptorum libri iv. Londini, 1684. 4to, pp. [40] 338 [2]. II. 44; II* 29
- De Secretis adeptorum libri iv. Hamburgi, 1685. 12mo, pp. [48] 602
[10]. II. 44; II* 29
- Four books concerning the secrets of the adepts. London, 1685. 4to,
pp. [52] 380. II. 44; II* 29
- De Secretis adeptorum libri iv. Lipsiæ, 1768. 8vo, pp. [48] 548 [12].
II. 44; II* 29
- WHITE (FRANCIS SELLO).
- A History of Inventions and Discoveries: Alphabetically arranged.
London, Brighton printed, 1827. 8vo, pp. iv. 547. III. 19
- WHITE (JOHN).
- Arts Treasury of Rarities: and curious Inventions. The fifth edition.
London. No date. Small 12mo, pp. 84. I. 17; I* 20
- WILLIAMS (J. FREDERICK LAKE).
- An Historical Account of Inventions and Discoveries ... In two Volumes.
London, 1820. 8vo, I. vii. [1 blank] 387 [1] Plate. II. [4] 500. III. 18
- WILLIAMS (RALPH).
- Physical Rarities, containing the most choice Receipts of Physick, And
Chyrurgerie, For the Cure of all Diseases incident to Mans Body.
London, 1651. 8vo, pp. [16] 208. IV. 20
- WILLSFORD (THOMAS).
- 390 Natures Secrets. Or, The Admirable and wonderfull History of the
generation of Meteors. London, 1658. 8vo, pp. [16 Portrait in-
cluded] 199 [1] [8]. IV. 12

WOLFIUS (JOHANN).

- Lectionvm Memorabilivm et Reconditarvm Centenarii xvi. ... Lauingæ suntibus Autoris impressit Leonhardus Rheinmichel. Typogr. Palatinus, anno 1600. Folio, I. ff. [36] 1012. II. ff. [20] 1074. V. 42

WORCESTER (EDWARD SOMERSET, MARQUIS OF).

- A Century of the Names and Scantlings of such Inventions, as at present I can call to mind to have tried and perfected. London, 1663. 12mo, pp. [20] 72 [2 blank, 9, 1 blank]. II. 50; II* 35
- A Century of the Names and Scantlings of such Inventions... Glasgow, R. & A. Foulis, 1767. 12mo, pp. xxvii. [1 blank] 76 [10]. II. 50; II* 35
- A Century of ... Inventions ... London, 1786. 16mo, pp. xiv. 41 [5, 4 blank]. III. 41
- A Century of the Names and Scantlings of such Inventions ... Glasgow, A. Duncan and R. Chapman, 1792. 12mo, pp. iv., xi. [1 blank] 40 [4]. II. 50; II* 35
- The Century of Inventions..., By Charles F. Partington. London, 1825. Small 8vo, pp. lxxxiv. 138. Woodcuts. II. 50; II* 35
- The Life, Times, and Scientific Labours of the second Marquis of Worcester. To which is added, a reprint of his Century of Inventions, 1663, with a Commentary thereon, by Henry Dirks. London, 1865. 8vo, pp. xxiv. 624. Frontispiece, portrait, plan, and illustrations in the text. II. 49; II* 35

See LUPTON (THOMAS).

ZIMARA (MARCO ANTONIO).

- Marci Antonii Zimaræ, Philosophi, antrvm Magico-Medicum. ... Francofvrti, M.DC.XXV. 8vo, pp. [13] 3 blank, 525. VI. 8
- Marci Antonii Zimaræ Magische Artzney-Kunst... Darzu kommt über dieses noch I. Eine deutliche Handleitung... II. Ein besonders Tractätlein ... III. Eine Anweisung ... Alles mit gewissen Proben und Experimenten ... ausgezieret. Franckfurt, 1685. 8vo, pp. [40 including engraved title] 636 [16]. VI. 9

ZIMMERMAN (HEINRICH THEODOR).

- 400 Dreihundert und fünfzig entschleierte Geheimnisse aus dem Nachlasse der berühmten Chemiker, Oeconomen und Sympathiseur's Daniel Groos, Andreas Schulze und Nathusius Krumm. Dritte Auflage. Heilbroun [1805?] Square 8vo, pp. x. 118. IV. 38

